IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1976

No. 76-1601

MARINE DEVELOPMENT CORPORATION,
Petitioner,

v.

MRS. ALANA G. HEIMAN, in Her Own Right; SANDRA JEAN HEIMAN, by MRS. ALANA G. HEIMAN, Her Mother and Next Friend; and H. MAURICE MITCHELL and JOSEPH W. GELZINE, Co-Administrators in Succession With Will Annexed of the Estate of Max Heiman, Deceased; BOATEL COMPANY, INC.; KOHLER CO. and MEDLIN MARINE, INC.,
Respondents.

PETITION FOR A WRIT OF CERTIORARI

To the United States Circuit Court of Appeals for the Eighth Circuit

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CITATIONS TO OPINIONS BELOW

The Opinions of the United States Court of Appeals for the Eighth Circuit and the Opinion of the United States District Court, Eastern District of Arkansas, Western Division, are unreported. The Order of the Eighth Circuit Court of Appeals

rendered May 7, 1976 denying the Petition for Rehearing with suggestion for rehearing en banc filed by Medlin Marine, Inc. is printed in Appendix A. The opinion of the Eighth Circuit sitting en banc rendered April 14, 1976, is printed in Appendix B. The Order of the Eighth Circuit Court of Appeals rendered February 17, 1976, granting Marine Development Corporation's Petition for Rehearing en banc is printed in Appendix C. The Order of the Eighth Circuit Court of Appeals rendered February 2, 1976, setting aside its Order of January 30, 1976 is printed in Appendix D. The Order of the Eighth Circuit rendered January 30, 1976, is printed in Appendix E. The panel opinion of the Eighth Circuit Court filed January 13, 1976, is printed in Appendix F.

The findings, opinions and judgment of the United States District Court, Eastern District, Western Division, are printed as follows:

Memorandum Opinion of Judge Garnett Thomas Eisele filed of record May 5, 1975, is printed in Appendix G.

Judgment filed of record March 14, 1975 is printed in Appendix H.

Memorandum Opinion of Judge Garnett Thomas Eisele filed of record on March 7, 1975, is printed in Appendix I.

Findings from the Bench by Judge Eisele on March 4, 1975, is printed in Appendix J.

JURISDICTION

The judgment of the Eighth Circuit Court of Appeals by Per Curiam Order dated April 14, 1976 was entered on May 14, 1976. Timely Petition for Rehearing en banc filed by Medlin Marine, Inc. was denied on May 7, 1976. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

QUESTION PRESENTED

Whether the Eighth Circuit Court of Appeals erred in affirming the lower court's ruling in an admiralty case that Marine Development Corporation, a component part manufacturer, had a "duty to warn" the manufacturer of the completed product, Boatel Company, Inc., of a potential danger based upon hypothetical facts (which were not the facts of the case as found by the trial judge) even though the Court found the component parts were not defective, that the air conditioning system was not designed by Marine Development Corporation (but by Boatel alone) and that Boatel knew that carbon monoxide gases were lethal and dangerous.

STATEMENT

This is an admiralty case brought pursuant to Rule 9(h) of the Federal Rules of Civil Procedure by the Estate of Max Heiman, deceased, Mrs. Alana Heiman and Sandra Heiman against Boatel Company, Inc. (Boatel),[1] the designer and manufacturer of a forty-seven foot Islander yacht purchased by Max Heiman; Medlin Marine Company, Inc. (Medlin), the selling franchise dealer; Kohler Co.,[2] the manufacturer and seller of a gasoline powered generator which was incorporated into the design of the yacht; and Marine Development Corporation (Marine), the manufacturer of air conditioning component parts, which were sold to Boatel to be used in the air conditioning system on the Heiman yacht.

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[1] Judgment was taken against Boatel by default, which is bankrupt.

[2] Judgment was entered in favor of Kohler in the lower court and affirmed by the Eighth Circuit Court of Appeals, sitting en banc. Medlin appealed the court's judgment that Kohler was not liable, but neither argued or briefed the issue on appeal.

Alana Heiman and Sandra Heiman sustained personal injuries and Max Heiman died due to inhalation of carbon monoxide on the night of September 1, 1973, while they were sleeping on board the yacht with the air conditioning running on the Arkansas River just north of Little Rock, Arkansas.

Expert testimony disclosed that carbon monoxide produced by the generator was exhausted out the stern of the boat. Immediately above the exhaust outlet were four drain holes incorporated into an overhang on the stern. The carbon monoxide was drawn back into the engine compartment through the four drain holes because of the vacuum created by the gasoline powered generator's need for air for combustion purposes. The engine compartment was separated from the living quarters by a non-airtight wall. The return air vent for the forward air conditioning system was placed in the equipment room which was connected primarly with the engine room by a conduit on the starboard side. When operating, the air conditioning unit pulled air from the engine compartment, which in turn introduced dangerous amounts of carbon monoxide in the living space.

Recovery was sought against the defendants on the basis of negligence, breach of implied warranties and strict liability. Being in admiralty, the case was tried before the Honorable Judge G. Thomas Eisele. At the close of the evidence, the Court made separate findings of facts and conclusions of law. The manufacturer, Boatel, being in default, was found negligent and also strictly liable. The seller, Medlin, was found liable in strict liability. The Court found that the generator manufacturer, Kohler, had no duty to warn and, therefore, was not liable. The air conditioning component part manufacturer, Marine, was found liable for negligent failure to warn. The trial court apportioned fault between Boatel and Marine, finding 80% attributable to Boatel and 20% to Marine. The Court further found that the fault of Medlin and Marine was equal.

REASONS FOR GRANTING THE WRIT

Argument will be based on the trial court's findings, since the Eighth Circuit Court Mandate merely affirmed the Judgment of the lower court. By this action the Eighth Circuit failed to decide an important question of federal law which has not been, but should be, settled by this Court.

Marine first contends that it is not liable for failure to warn as a matter of law, based upon the trial court's own findings.[3]

The trial court erroneously held Marine liable for failure to warn based upon hypothetical facts which were not the facts of the case as so found by the trial court. Marine submits that the trial court, just the same as a jury, cannot hold a defendant liable on facts which were not found to be the facts in the case, especially where the conclusions are contrary to the trial court's own findings. *Standhardt v. Flintkote Co.*, 508 P.2d 1283 (1973).

The trial court specifically found that the carbon monoxide re-entered the engine compartment of the Heiman yacht through four holes in the transom and that the four holes were a defect which made the boat inherently dangerous. The four holes were designed and manufactured by Boatel alone, and no one but Boatel knew of the four holes. The four holes constituted a defect in the boat and were the basis for finding liability against Boatel and Medlin. The trial court further found that Boatel alone designed and installed the air conditioning system as it was found in the Heiman yacht in direct violation of the clear and unambiguous installation instructions of Marine. The Court further found that if the air conditioning components furnished by Marine had been properly installed in accordance with Marine's instructions, the Heimans would not have been harmed. The trial court specifically found that there were no

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[3] The findings of fact as to Marine are found in Appendix J, page A-57.

defects in the component parts sold to Boatel by Marine. The liability of Marine for failure to warn was predicated on the finding that Marine knew or should have known that carbon monoxide *might* during the life of the vessel escape from either the generator motor or the two propulsion engines due to accident or ordinary wear and tear. The trial court found that the foregoing possible fact situation created a duty on Marine's part to warn of any hazard to life and health which might foreseeably result from the improper location of its equipment.

The holding of the trial court was clearly erroneous in that the trial court's conclusions of law are based upon facts which were not the actual facts in the case as so found by the trial court itself. The trial court found that there were no leaks in the exhaust system in the Heiman yacht. To hold Marine liable, the Court therefore based its findings upon hypothetical facts concerning a possible leak in order to find any foreseeable duty to warn. By doing so, the trial court has completely ignored its finding of fact concerning the emission of carbon monoxide out of the boat and then back through the four holes into the transom, which was not foreseeable as to Marine.

Secondly, Marine had no duty to warn. Marine respectfully submits that the duty to warn is imposed on the manufacturer of a *completed product* and not upon the manufacturer (like Marine) of component parts which undergo substantial change by the manufacturer before the completed product is sold to the ultimate consumer. The only cases Marine has found construing the issue of duty to warn involved manufacturers of completed products and not component part manufacturers, when the component parts were found not to be defective. The duty to warn is imposed upon Boatel, the manufacturer, not upon Marine. See *Jacobson v. Colorado Fuel & Iron Corp.*, 409 F.2d 1263 (9th Cir. 1969); *Walker v. Stauffer Chem. Corp.*, 19 Cal App 3d 671, 96 Cal.Rptr. 803 (1971); Restatement (Second) of Torts, 402A caveats (2) and (3) and comments. There is no duty to warn of obvious dangers whether the

cause of action is stated in terms of negligence or strict liability theory. *Ward v. Hobart Mfg. Co.*, 450 F.2d 1176 (5th Cir. 1971); *Posey v. Clark Equip. Co.*, 409 F.2d 560 (7th Cir.), *cert. denied* 396 U.S. 940 (1969); *Larsen v. General Motors Corp.*, 391 F.2d 495 (8th Cir. 1968); W. Prosser, The Law of Torts 649 (4th ed. 1971); Restatement (Second) of Torts § 388 comment *k*; *Kerber v. American Machine & Foundry Co.*, 411 F.2d 419, 421-422 (8th Cir. 1969); Restatement (Second) of Torts, § 402A comments *i, j*.

The installation of the air conditioning system by Boatel in such a manner as to allow the introduction of carbon monoxide into the return intake was an obvious danger and the manufacturer is entitled to assume that his product will not be used in an obviously dangerous manner. *Marker v. Universal Oil Products Co.*, 250 F.2d 603 (10th Cir. 1957); *Brown v. General Motors Corp.*, 355 F.2d 814 (4th Cir. 1966), *cert. denied* 386 U.S. 1036 (1967). This is so *a fortiori* where the product furnished is a non-defective component part to be incorporated into an air coditioning system by knowledgeable technicians and engineers employed by the manufacturer, Boatel. *Jacobson v. Colorado Fuel & Iron Corp., supra.*

Kohler, the manufacturer of the gasoline generator, was not found to be liable for failure to warn. Yet it was Kohler's generator that produced the carbon monoxide. How can it be said that Kohler could not reasonably foresee leaks in its own exhaust system and have no duty to warn, but Marine could? Kohler, like Marine, had furnished installation instructions, but no warnings. If Kohler had no duty to warn, neither does Marine, for the reason that the danger was obvious and the component parts used underwent substantial change and were installed into a completed product manufactured by Boatel, alone. The duty to warn was that of Boatel—the manufacturer.

For the foregoing reasons, Marine's motion for a directed verdict should have been granted.

CONCLUSION

A Petition for a Writ of Certiorari should be granted to determine whether the doctrine of "duty to warn" extends to include manufacturers of component parts, which are found not to be defective and have undergone substantial change by the manufacturer before the completed product is sold to the ultimate consumer in order to have uniformity of decisions among the courts of appeal.

The Opinion of the trial court which was affirmed by the Eighth Circuit Court of Appeals, has erroneously extended the law of products liability to include not only the seller and manufacturer of the product, but also all of the component part manufacturers on the theory of failure to warn. The duty imposed upon Marine in this case is contrary to law and policy reasoning. The policy reasoning for *not* holding a component part manufacturer liable is stated in *Walker v. Stauffer Chem. Corp., supra*, as follows:

> "We do not believe it realistically feasible or necessary to the protection of the public to require the manufacturer and supplier of a standard chemical ingredient such as bulk sulfuric acid, not having control over the subsequent compounding, packaging or marketing of the item eventually causing injury to the ultimate consumer, to bear the responsibility for that injury. The manufacturer (seller) of the product, causing the injury is so situated as to afford necessary protection. *Escola v. Coca Cola Bottling Co.*, supra, 24 Cal.2d 453, 462, 150 P.2d 436."

Respectfully submitted

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APPENDIX

APPENDIX A

United States Court of Appeals
for the Eighth Circuit

75-1258 September Term, 1975

Mrs. Alana G. Heiman, etc. et al.,
Appellees,

vs.

Medlin Marine, Inc.,
Appellant.

75-1383

Mrs. Alana G. Heiman, etc., et al.,
Appellees,

vs.

Medlin Marine, Inc.,
Appellant.

Appeals from the United States District Court for the Eastern District of Arkansas.

The Court having considered petition for rehearing en banc filed by counsel for appellant and, being fully advised in the premises, it is ordered that the petition for rehearing en banc be, and it is hereby, denied.

Considering the petition for rehearing en banc as a petition for rehearing, it is ordered that the petition for rehearing also be, and it is hereby, denied.

May 7, 1976

APPENDIX B

United States Court of Appeals
For the Eighth Circuit

No. 75-1258 — September Term, 1975

Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Medlin Marine, Inc.,
Appellant.

No. 75-1287
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.

No. 75-1383
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Medlin Marine, Inc.,
Appellant.

No. 75-1384
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.

Appeals from the United States District Court for the Eastern District of Arkansas.

Before Gibson, Chief Judge, Lay, Heaney, Bright, Ross, Stephenson, Webster, and Henley, Circuit Judges

Per Curiam

The prior panel opinion filed in these cases January 13, 1976 is ordered withdrawn.

The judgment of the United States District Court for the Eastern District of Arkansas is hereby affirmed by an equally divided Court.

April 14, 1976

(See attached sheet for cost information.)

A true copy.

Attest:

ROBERT C. TUCKER

Clerk, U. S. Court of Appeals, 8th Circuit.

May 14, 1976

APPENDIX C

United States Court of Appeals
For the Eighth Circuit

No. 75-1258 September Term, 1975
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Medlin Marine, Inc.,
Appellant.
No. 75-1287
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.
No. 75-1383
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Medlin Marine, Inc.,
Appellant.
No. 75-1384
Mrs. Alana G. Heiman, etc., et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.

Appeals from the United States District Court for the Eastern District of Arkansas.

The court has carefully considered petition for rehearing with suggestions for rehearing en banc filed by counsel for appellant Marine Development Corporation. Being fully advised in the premises it is now here ordered that the petition for rehearing

with suggestions for rehearing en banc be, and it is hereby, granted.

These cases are to be re-submitted to the court en banc at a session of the court to be later determined.

February 17, 1976

APPENDIX D

United States Court of Appeals
For the Eighth Circuit

75-1287 September Term, 1975

Mrs. Alana G. Heiman in her own right, et al.,
Appellees,
vs.
Marine Development Corporation,
Appellant.

75-1384
Mrs. Alana G. Heiman in her own right, et al.,
Appellees,
vs.
Marine Development Corporation,
Appellant.

Appeals from the United States District Court for the Eastern District of Arkansas

On the Court's own motion it is now here ordered that our order of January 30, 1976, denying petition for rehearing en banc and rehearing be, and it is hereby, vacated and set aside.

February 2, 1976

APPENDIX E

United States Court of Appeals
For the Eighth Circuit

75-1287 September Term, 1975

Mrs. Alana G. Heiman in her own right, et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.

75-1384
Mrs. Alana G. Heiman in her own right, et al.,
Appellees,
vs.
Marine Development Corp.,
Appellant.

Appeals from the United States District Court for the Eastern District of Arkansas

The Court having considered petition for rehearing en banc filed by counsel for appellant and, being fully advised in the premises, it is ordered that the petition for rehearing en banc be, and it is hereby, denied.

Considering the petition for rehearing en banc as a petition for rehearing, it is ordered that the petition for rehearing also be, and it is hereby, denied.

January 30, 1976

APPENDIX F

United States Court of Appeals
For the Eighth Circuit

Nos. 75-1258, 75-1287, 75-1383 and 75-1384

No. 75-1258

Appeal from the United States District Court for the
Eastern District of Arkansas

Mrs. Alana G. Heiman, in her own right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, her mother and next friend, and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max Heiman, Deceased,

Appellees,

v.

Boatel Company, Inc., Marine Development Corporation,

and

Kohler Co.,

Appellee,

and

Medlin Marine, Inc.,

Appellant.

No. 75-1287

Appeal from the United States District Court for the
Eastern District of Arkansas

Mrs. Alana G. Heiman, in her own right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, her mother and next friend; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max Heiman, Deceased,

Appellees,

v.

Boatel Company, Inc.,
Marine Development Corporation,

Appellant,

and

Medlin Marine, Inc. and Kohler Co.

No. 75-1383

Appeal from the United States District Court for the
Eastern District of Arkansas

Mrs. Alana G. Heiman in her own right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, her mother and next friend, and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max Heiman, Deceased,

Appellees,

v.

Boatel Company, Inc., Marine Development Corporation, Kohler Co. and Medlin Marine, Inc.,

Appellant.

No. 75-1384

Appeal from the United States District Court for the Eastern District of Arkansas

Mrs. Alana G. Heiman in her own right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, her mother and next friend; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max Heiman, Deceased,

Appellees,

v.

Boatel Company, Inc., and Marine Development Corporation,

Appellant,

Medlin Marine, Inc. and Kohler Co.

Submitted: October 17, 1975

Filed: January 13, 1976

Before Clark, Associate Justice,* Lay and Ross, Circuit Judges.

Lay, Circuit Judge.

This is an admiralty case brought by the Estate of Max Heiman, deceased, Mrs. Alana Heiman and Sandra Heiman against Boatel Company, Inc. (Boatel), the manufacturer of a yacht purchased in August, 1972 by Max Heiman. Boatel's retail franchise dealer, Medlin Marine, Inc. (Medlin), the air-conditioning unit manufacturer, Marine Development Corp.

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* Associate Justice Tom C. Clark, United States Supreme Court Retired, sitting by designation.

(Marine), and the generator manufacturer, Kohler Company, were also sued.[1] The plaintiffs sought damages for the death of Max Heiman and for personal injuries to Mrs. Heiman and their daughter, Sandra, due to inhalation of carbon monoxide on September 1, 1973 while the Heimans slept on the yacht with the airconditioner running.

The evidence disclosed that the gasoline-powered generator created carbon monoxide and exhausted it at the stern below the water line. Immediately over the boat's exhaust outlet were four drainage holes which due to an overhang were not visible when the boat was in the water. The generator's need for air tended to create a vacuum, causing the exhausted fumes to be sucked through the four holes back into the engine compartment. The boat's engine compartment was separated from the living quarters by a non-airtight wall. Boatel installed the air-conditioning unit near a passage leading to the engine compartment. When operating, the unit pulled air from that compartment, thereby introducing dangerous amounts of carbon monoxide into the living quarters.

Recovery was sought on the basis of negligence, breach of implied warranty and strict liability. The case was tried to the court, the Honorable Judge G. Thomas Eisele. The court's findings on liability were that:

1. Boatel, the yacht manufacturer, was negligent and was also liable in strict liability;

2. Marine Development, the airconditioning unit manufacturer, was negligent for failure to warn;

3. Medlin Marine, the retailer, was liable in strict liability, but was not negligent since there was no evidence that Medlin knew or should have known of the holes over the exhaust; and

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[1] The defendants cross-complained against each other. Plaintiff dismissed its complaint against defendant Kohler, but the cross-complaints against Kohler remained.

4. Kohler, the generator manufacturer, had no duty to warn and was not otherwise negligent.

The court apportioned the fault between Boatel and Marine, finding that 80% was attributable to Boatel and 20% Marine. The court held that Medlin was entitled to indemnity against Boatel for its entire liability. The court further found that the fault of Medlin and Marine was equal and denied any indemnity between those parties. Medlin and Marine appeal. Boatel, a bankrupt, did not defend below and takes no part in this appeal.

The principal issues on appeal are 1) the sufficiency of evidence to sustain Marine's liability for negligent failure to warn; 2) the question of indemnity between Medlin and Marine; and 3) whether the wrongful death damages awarded were based on proper evidence and were not otherwise excessive.[2]

Marine's Liability: Duty to Warn

At the conclusion of the trial, Judge Eisele filed detailed findings of fact and conclusions. The court found that the air-conditioning unit was not mechanically or otherwise physically defective; that Boatel installed the airconditioning unit in violation of the installation instructions furnished by Marine; that there is nothing inherently dangerous in the use of properly installed airconditioning systems; and that had Boatel installed the system in accord with the instructions, the Heimans would not have been harmed.

Nonetheless, the trial court found Marine liable for its failure to warn Boatel and the Heimans of the potential consequences of improperly installing its airconditioning components. The trial court found:

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[2] Medlin noticed an appeal of the trial court's judgment that Kohler was not liable, but neither argued nor briefed this issue on appeal. Therefore we deem the appeal on this issue abandoned.

. . . Marine Development Corporation knew or should have known that there were significant openings from the engine compartment into the living spaces . . . and that . . . carbon monoxide might, during the life of the vessel, be found in the engine compartment in dangerous concentrations.

Marine Development also knew or should have known that if the forward cooling unit were installed as it was in the equipment room it could and would, under certain foreseeable circumstances, draw air from the engine compartment and circulate it throughout the living areas of the boat.

Of all the parties to this action, Marine is and should be the most knowledgeable with respect to the effects of air-conditioning systems and their operations. It has more than 50 percent of all the air-conditioning business in the class of boats and yachts of the approximate size of the Heiman vessel.

It has held itself out as a specialist in marine air-conditioning . . .

The court further found:

> Marine, being so intimately associated with boat manufacturers and boat designers, knew or should have known that such manufacturers, for their own convenience and for design purposes, might install the cooling unit so as to have the effect of pumping air from the engine compartment.
>
> The potential seriousness of the injury which might result is obvious. In addition, there is no practical impediment to its ability to give an adequate warning. Carbon monoxide is odorless, colorless, and tasteless. It is insidious and subtle in its operation and effect. If there is any risk of it being introduced into a living space, a warning of that risk should obviously be given.

The record reveals substantial evidence supporting these findings. We cannot say under the circumstances that the findings are clearly erroneous. It has long been held that a manufacturer is liable for foreseeable misuses of its product and for failure to warn of those misuses. *See Griggs v. Firestone Tire & Rubber Co.*, 513 F.2d 851 (8th Cir. 1975); *Hoppe v. Midwest Conveyor Co.*, 485 F.2d 1196, 1201 (8th Cir. 1973); *Larsen v. General Motors Corp.*, 391 F.2d 495, 504-05 (8th Cir. 1968).

The trial court correctly pointed out the basic distinction between the duty to give adequate instructions for the installation and use of a product and the duty to warn of hazards which might result from failure to follow those instructions. *See Buffington v. Amchem Products, Inc.*, 489 F.2d 1053, 1054-55 (8th Cir. 1974); *Ross v. Up-Right, Inc.*, 402 F.2d 943, 948 (5th Cir. 1968); L. Frumer & M. Friedman, Products Liability § 8.05[1] (1975). Thus, there can be no argument that the installation instructions were an adequate warning of the potential danger from improper installation of the unit.

Marine further urges that it had no duty to warn since Boatel had similar knowledge, and that the dangers of improper installation were common knowledge. It is also urged that a warning would have been futile since even after this accident, Boatel failed to relocate airconditioning units on similar boats. We think the evidence is sufficient to make these questions of fact, rather than of law.

The trial court found that Marine had superior knowledge of the operation of the air conditioning unit, that it held itself out to the public as a specialist in marine air conditioning and that it was totally familiar with boat construction. From this, the court reasonably inferred that Marine should have known of the danger that an improperly installed unit would act as a pump, drawing the gases from the engine compartment, whereas Boatel did not possess such expertise and knowledge. The question of whether a warning to the boat manufacturer would have been futile is also a question to be resolved by the fact finder. A similar question arose in *Post v. American Cleaning Equipment Corp.*, 437 S.W.2d 516 (Ky. 1969), which involved an injury from an industrial vacuum cleaner bearing the instructions "only use on 115 volts AC or DC". The plaintiff plugged the unit into a 220 DC outlet and the issue was the adequacy of the instructions. In reversing a directed verdict for the defendant, the Kentucky Supreme Court stated:

> It is no answer to say that appellant would have attached the machine to a 220 DC outlet anyway, since he did so in face of the directions which were furnished. Maybe he would have, but the facts at hand make that a question of conjecture. One thing seems certain—IF the dire consequences of using 220 DC had been plainly and adequately posted—the appellee would prevail as a matter of law. The fact that reasonable differences of view may be reached as to the adequacy of the warning here makes this a jury case. . . .

437 S.W.2d at 521.

We conclude that there was sufficient evidence to support the trial court's finding that Marine Development Corporation was liable in both strict liability and "negligence".

Indemnification

The court denied indemnification to Medlin, the retailer, as against Marine Development, the air conditioner manufacturer.[3] It did so even though Medlin was liable only under strict lia-

[3] The Court also denied Marine's claim for indemnification against Medlin. Although Marine appealed from this judgment, it was neither argued nor briefed on appeal and therefore is waived and abandoned.

bility, while Marine's liability was based on negligence. The court reasoned that strict liability implied fault and thus considered the question as one of contribution rather than indemnification, concluding that the fault of Marine and Medlin was equal.

The Restatement of Restitution provides:

> A person who, without personal fault, has become subject to tort liability for the unauthorized and wrongful conduct of another, is entitled to indemnity from the other for expenditures properly made in the discharge of such liability.

Restatement, Restitution § 96 (1937).

The difference between primary and secondary liability is not based on a difference in degrees of fault. It rests rather on the nature of the legal obligation owed by the wrongdoer to the injured party. *See Tromza v. Tecumseh Products Co.*, 378 F.2d 601, 605-06 (3rd Cir. 1967).

We find no authority which would alter the traditional tests of indemnity under the circumstances. Medlin's responsibility is secondary when compared to Marine's. This is obvious from the finding that Medlin's fault is based only on strict liability and that none of Medlin's personnel knew or should have known the danger involved. Medlin's liability is vicarious and Marine must make Medlin whole.

We therefore find that the court erred in denying Medlin indemnity against Marine.

Damages

The trial court awarded the administrators of the decedent's estate the following amounts:

Alana G. Heiman, wife, $443,762.07,
Sandra Jean Heiman, daughter, $41,536.33,
Judith Heiman Samuel, daughter, $21,000.00,
Estate of Max A. Heiman, $5,906.85.

Marine and Medlin attack this verdict on the grounds that the trial court erred 1) in its method of determining contribution as an element of damage; 2) in admitting Mrs. Heiman's testimony concerning her living expenses subsequent to Mr. Heiman's death on the issue of contribution; 3) in considering a 5% to 6% managerial fee for the operation of apartments owned by Mr. Heiman; 4) in considering the decedent's tax records while he was employed by the Gus Blass Company; 5) in allowing an inflationary factor; and 6) in awarding excessive damages.

In awarding damages the trial court relied on the elements of damage in admiralty wrongful death cases set forth in *Sea-Land Services, Inc. v. Gaudet*, 414 U.S. 573 (1974).[4]

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[4] There the Court observed:

> Recovery for loss of support has been universally recognized, and includes all the financial contributions that the decedent would have made to his dependents had he lived. Similarly, the overwhelming majority of state wrongful-death acts and courts interpreting the Death on the High Seas Act have permitted recovery for the monetary value of services the decedent provided and would have continued to provide but for his wrongful death. Such services include, for example, the nurture, training, education, and guidance that a child would have received had not the parent been wrongfully killed. Services the decedent performed at home or for his spouse are also compensable.
>
> Compensation for loss of society, however, presents a closer question. The term "society" embraces a broad range of mutual benefits each family member receives from the others' continued existence, including love, affection, care, attention, companionship, comfort, and protection. Unquestionably, the deprivation of these benefits by wrongful death is a grave loss to the decedent's dependents,
>
> * * * * * * *
>
> Finally, in addition to recovery for loss of support, services, and society, damages for funeral expenses may be awarded un-

The basic attack relates to the damages awarded by reason of the alleged money contributions. Defendants contend that the award was excessive due to Mr. Heiman's deteriorating financial position. To aid our discussion we set forth in the margin the relevant part of Judge Eisele's detailed findings and conclusions.[5]

In assessing damages for wrongful death a trier of fact must make a reasonable extrapolation from the evidence of the amount necessary as compensation for the loss. At best this can only be an estimate of actual damage projected over a person's life expectancy. The trier of fact has a duty to consider the totality of the decedent's personality, work habits and character, his past and present earnings as well as his proven capacity to earn. All relevant evidence, past and present, which provides insight to the fact finder may be considered in arriving

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der the maritime wrongful-death remedy in circumstances where the decedent's dependents have either paid for the funeral or are liable for its payment.

414 U.S. at 584-86, 591.

[5] Judge Eisele found:

> Although the status of Mr. Heiman's economic condition at the time of his death, based as it was upon income from a motel and from apartment complexes located in Arkansas and Florida, was precarious and deteriorating, it is likely that, had he lived, he would have salvaged at least some small part of his holdings. . . .
>
> . . . [A] fair interpretation of the evidence forces the Court to find that, had Mr. Heiman lived, he would have needed a combination of great effort and extremely good fortune to salvage even as much as a fourth of his overall holdings and that, realistically, it is more probable that, had he lived, Mr. Heiman would only have been able to extricate himself from his financial difficulties without any net personal obligation, salvaging only a small, perhaps even nominal, amount of his business holdings. The Court must analyze the probable "contributions" element of damages with this finding in mind.
>
> . . . . . .
>
> The evidence clearly establishes that Mr. Heiman was a man of business and executive ability. Before 1965 he had held positions of responsibility with one of the largest department stores in the State of Arkansas, the Gus Blass Company. The evidence from his W-2 forms indicates that his average annual income for the last three years he was with the Gus Blass Company (1963, 1964 and 1965) was in excess of $20,000.00. The compensation for performing similar services in 1975 would obviously be considerably in excess of that figure. . . . This, then, is another of the bases upon which the Court's decision concerning the amount and the probability of future contributions must be predicated.
>
> When Mr. Heiman got seriously involved in the real estate, motel and apartment building ventures, he devoted most of his time to personally overseeing such operations. He maintained an office with a secretary at the Holcomb Heights Apartments. It is true that he had on-the-site employees who looked after the routine operations, the collection of rents and maintenance. But, with the exception of the Fair Park Gardens, which were under a management arrangement with Block Realty Company, he contributed a considerable amount of his time to the overall management of the properties. The evidence indicates that, had Mr. Heiman not been performing these services, he would have had the alternative of contracting for such services with some real estate management company. The usual fee for

at a just verdict. To urge that one should not consider past income and past employment as reflected by tax returns, or that it is improper to consider uncompensated endeavors which might have contributed to growth in future net worth is to suggest verdicts based on incomplete evidence. To urge in a wrongful death case that the deceased's future earning capacity must be measured only in terms of his actual income at the time of his death ignores reality and benefits only the wrongdoer. The law of compensation does not function within such narrow constraints. We similarly disregard the attack on admission of the evidence of Mrs. Heiman's expenses after the accident. These were all relevant factors to be considered. The trial court, as any trier of fact, was entitled to make reasonable inferences from all of the evidence.

We have more difficulty with the admitted testimony of the economist. In *Riha v. Jasper Blackburn Corp.*, 516 F.2d 840 (8th Cir. 1975), this court reversed a jury verdict where an economist had projected a specific annual inflation rate over a

person's work expectancy. We held this to be unduly speculative when the exact income was projected to the year 2005. *Riha* was followed by *Johnson v. Serra*, 521 F.2d 1289 (8th Cir. 1975), where in a wrongful death action we excluded testimony of an economist's projection of an eight per cent inflation rate over the decedent's work expectancy to the year 2002. In both cases, we followed the Sixth Circuit's decision in *Bach v. Pennsylvania Central Transportation Co.*, 502 F.2d 1117 (6th Cir. 1974). We approved language from *Bach* which indicated that "[s]ome consideration of probabilities is inevitable in any fair award of damages." 516 F.2d at 845, *quoting* 502 F.2d at 1122.

Our opinions in *Riha* and *Johnson* were not intended to preclude use of economists as experts to testify on probable wage increases over reasonable periods of time or on inflationary or deflationary factors of the past and their general relevance to the future. In *Riha* we held, consistent with Nebraska law and

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such services would run in the neighborhood of five to six percent of the gross receipts. Of course, such a firm would have had to pay the management expenses and wages of the on-the-site employees out of its fees. Looking at Mr. Heiman's tax records covering his various operations over a period of years, the Court finds that he was performing services which, had they been contracted, would have required the payment of at least $20,000 per year over and above the management and employee expense actually experienced.

. . . Looking at both Mrs. Heiman's testimony as to her actual expenses since Mr. Heiman's death and the tax records and other records kept by Mr. Heiman reflecting contributions prior to his death, the Court finds that on an average Mr. Heiman was contributing just under $30,000 to the living expense requirements of the entire family. In making this determination, the Court has disregarded certain items, such as jewelry expenditures, from the figures testified to by Mrs. Heiman on the one hand, and, on the other hand, has reduced the figures revealed by Mr. Heiman's records by the amounts of the insurance premiums, the boat expense, and certain other expenses. Had he lived, Mr. Heiman's own living expenses would have had to be defrayed out of the total living expense contributions. Furthermore, if, as the Court suspects, financial

prior federal cases, that the precise mathematical projection by the economist using an inflation factor of seven per cent to the year 2005 was too conjectural. We held that the expert witness was not competent to testify, within any acceptable range of probability, that a precise inflationary rate would continue for so long. The rate of inflation depends on many collateral considerations such as war and peace, tax rates, the state of the general economy, interest rates and myriad other extrapolations. The science of economics is too imprecise at present for its experts to offer more than speculative guesses as to the state of the economy for the future. As we stated in *Johnson:*

> Inflationary forecasts of economists are, of course, only personal opinions, even when based on past trends. It must be recognized that trends may often be faulty indicators of the future as well as the present and that economists have fared only slightly better than fortune tellers and soothsayers in foretelling the future. Economic factors operate at varying degrees of intensity in our economy, and it seems there are as many explanations of past trends and predictions of future trends as there are economists. We could be entering into an inflationary cycle with its attend-

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circumstances would have required Mr. Heiman to accept employment from a third-party employer, he would, of course, have had to pay state and federal income taxes on his compensation, a situation which would be entirely different from the tax situation which had existed in the years immediately prior to his death where, because of the nature of his investments and the tax laws involved, he was not required to pay such taxes.

The court is convinced that, had Mr. Heiman lived, he and his family would have had to cut down somewhat on their overall style of living but would still have been able to live most comfortably.

From all the evidence, the Court finds that through one method or another Mr. Heiman, had he lived, would have been able to provide and would in fact have provided contributions and support to the other members of his family (i.e., excluding himself) in the sum of $22,500.00 per year, measured in 1975 dollars, over the remaining working years of his life.

> ant depreciation of the dollar or into a deflationary era, as in the 1930's. Both possibilities are to a considerable extent speculative and conjectural.

521 F.2d at 1294.

The dangers of allowing the expert to make such "guesses", even though subjected to cross-examination, is that it leads to protracted litigation of collateral issues without reasonable boundaries and allows unreliable conjecture to be conveyed in terms of mathematical certainty.

Consistent with our rulings in *Riha* and *Johnson*, we think that in the instant case it was error for the trial court to receive into evidence the economist's projection of Mr. Heiman's contributions over his work life expectancy using a 5½% inflation rate. Whether this error requires a reversal and remand to the district court, however, necessitates further analysis.

In the present case the trial judge, rather than a jury, served as the trier of fact. The essential difference between a bench trial and a jury trial is that the trial judge's verdict is supported by specific findings of fact which must withstand analysis under the clearly erroneous test. As such, a trial judge's conclusion is more vulnerable on review than the jury verdict which will be sustained upon demonstration of substantial evidence to support the verdict. *See Oil Screw Noah's Ark v. Bentley & Felton Corp.*, 322 F.2d 3, 5-6 (5th Cir. 1963); *cf. Jackson v. Hartford Accident & Indemnity Co.*, 422 F.2d 1272, 1278 (8th Cir. 1970) (concurring opinion, Lay, J.). The jury's methodology in reaching its verdict is, of course, inherent in the verdict and is not subject to collateral attack. *Chicago, R. I. & Pac. R. R. v. Speth*, 404 F.2d 291 (8th Cir. 1968).

Nonetheless, in the instant case, the trial judge has set forth his factual findings, which clearly show that the court rejected the economist's analysis and applied his own understanding and

experience of inflationary impact on future contributions. Judge Eisele in rejecting the economist's testimony used a 5½% present value discount rate and then applied an inflationary factor of 4%, resulting in a discount of the projected earnings by 1½%. The economist estimated loss of future contributions to Mrs. Heiman as $760,276; Judge Eisele's figure was $350,910.

The fundamental question is thus whether the trier of fact may use his own understanding and experience in arriving at a damage figure where "expert" evidence as to the precise calculation, factors and result involved in the equation would be inadmissible.

In our prior opinions we have approved the following language from *Bach:*

> Even though no expert testimony on inflation and future increases was admitted, it was still error for the district court to charge the jury that it should not consider "future increases or decreases in the purchasing power of money." *Cf.* Willmore v. Hertz Corporation, 437 F.2d 357 (6th Cir. 1971). Inflation is a fact of life within the common experience of all jurors. Admittedly, if the jury considers this issue without expert testimony, their calculations will be even more imprecise. There is always a chance that the verdict may be too generous. But if jurors should be prohibited from applying their common knowledge of inflation in reaching a verdict, the party entitled to recovery could be grievously under-compensated. The court can always rectify an exorbitant verdict through its power of remittitur. See 6A Moore's Federal Practice ¶ 59.05[3].

502 F.2d at 1122, quoted in 516 F.2d 845.

Thus we are committed to the rule that although an expert witness may not project an inflationary rate over a person's life expectancy, the trier of fact may consider future increases

or decreases in the purchasing power of money. As indicated in *Bach*, even though a jury's opinion, like the economist's, may be imprecise, the ultimate check on their extrapolation is whether the verdict is exorbitant. Thus, we hold in the present case it was not error for the trial court, sitting as a trier of fact, to consider an inflationary impact on the damage award based on his own understanding and experience. The remaining question we must face then is whether the damage award is excessive.

The fundamental tests of whether a verdict is excessive are whether it falls within the reasonable range of the evidence and whether it is shocking to the conscience. *Krall v. Crouch Bros., Inc.*, 473 F.2d 717, 719 (8th Cir. 1973); *O'Brien v. Stover*, 443 F.2d 1013, 1018-19 (8th Cir. 1971); *Solomon Dehydrating Co. v. Guyton*, 294 F.2d 439, 447-48 (8th Cir.), *cert. denied*, 368 U.S. 929 (1961). The first is an objective test, the latter a subjective evaluation by the judges of this court. As we have discussed the verdict falls within a reasonable range of the evidence. The projected earnings of the deceased were established at $22,500 whereas there was evidence that in the past Heiman earned more than this. Further, in evaluating the totality of this proof and the circumstances surrounding Mr. Heiman's contributions to his wife and family, we do not find the verdict shocking.

The judgments for the plaintiffs are affirmed as against Marine and Medlin; the judgment denying the cross-complaint of Medlin against Marine is reversed and the district court is directed to enter judgment in favor of Medlin on its claim for indemnity against Marine; the judgment in favor of Kohler on the cross-complaint is affirmed. Costs of plaintiffs and Medlin shall be assessed to Marine; Kohler shall pay its own costs.

Ross, Circuit Judge, Dissenting.

I respectfully dissent. The result reached by the majority gives proof to the old saw that hard cases make bad law. The

death and injuries in this case were the result of negligence and defective design of the Heiman yacht by Boatel; however, Boatel is bankrupt and unable to respond in damages. Under the law of strict liability and implied warranty the dealer who acted as an intermediary between Boatel and the decedent Medlin is liable, even though it cannot be said that Medlin was at fault in any traditional sense of the word. In this case it is harsh that Medlin cannot be indemnified by Boatel, but that should not be justification to stretch the law of torts in order to impose liability on a party who is just as innocent of fault: Marine Development, the manufacturer of the air conditioning components.

The components supplied by Marine Development were not defective, and had they been installed as the manufacturer instructed, they would not have been dangerous. However, Boatel installed the air conditioning system on the Heiman yacht in such a way that one cooling unit's air intake was from the engineroom, and not surprisingly, the engineroom air contained, at the time of the accident, carbon monoxide.

There is no duty to warn of obvious dangers under either negligence or strict liability theory. *Ward v. Hobart Manufacturing Co.*, 450 F.2d 1176, 1188 (5th Cir. 1971); *Posey v. Clark Equipment Co.*, 409 F.2d 560, 563 (7th Cir.), *cert. denied*, 396 U.S. 940 (1969); W. Prosser, The Law of Torts 649 (4th ed. 1971); Restatement (Second) of Torts § 388, comment *k*; *see Kerber v. American Machine & Foundry Co.*, 411 F.2d 419, 421-422 (8th Cir. 1969); Restatement (Second) of Torts, § 402A, comments *i, j*. As Chief Judge Gibson stated in *Larsen v. General Motors Corp.*, 391 F.2d 495, 505 (8th Cir. 1968), cited by the majority:

> Almost any chattel or commodity is capable of inflicting injury; knives cut, axes split, dynamite explodes, food spoils, poison kills. Where the danger is obvious and known to the user, no warning is necessary and no liability

> attaches for an injury occurring from the reasonable hazards attached to the use of chattels or commodities, but where the dangerous condition is latent it should be disclosed to the user, and non-disclosure should subject the maker or supplier to liability for creating an unreasonable risk.

I believe that as a matter of law Marine Development was not liable here, because the installation of the air conditioner in a manner which permitted the introduction of carbon monoxide into the unit's air intake was an obvious danger and a manufacturer is entitled to assume that his product will not be used in an obviously dangerous manner. *Marker v. Universal Oil Products Co.*, 250 F.2d 603, 606-607 (10th Cir. 1957); *see Brown v. General Motors Corp.*, 355 F.2d 814, 819-821 (4th Cir. 1966), *cert. denied*, 386 U.S. 1036 (1967). This is so *a fortiori* where the product is merely a component which is to be incorporated into a system by technicians and engineers, as Boatel's personnel were here. *Jacobson v. Colorado Fuel & Iron Corp.*, 409 F.2d 1263, 1273 (9th Cir. 1969). The majority has come dangerously close to making the manufacturer an insurer in this case. I would reverse on the issue of Marine Development's liability.

I also dissent from the affirmance of the award of over half a million dollars in damages. It is inconceivable to me how—when "economists have fared only slightly better than fortune tellers and soothsayers" and the prediction of inflationary or deflationary trends by an expert is "to a considerable extent speculative and conjectural"—we can allow a federal judge to do what the acknowledged experts in the field cannot; that is to project a specific annual inflation rate over a person's life expectancy. As we recognized most recently in *Johnson v. Serra*, 521 F.2d 1289, 1295-1296 (8th Cir. 1975): "The federal circuits that have faced the issue in cases involving federally created claims, governed by federal rather than state law, have for the most

part rejected * * * trial court consideration of future inflationary trends in damage assessment." (Footnote omitted.) In *Johnson* we indicated we would probably follow the majority rule in a case applying federal law, such as this admiralty claim. *Johnson v. Serra, supra*, 521 F.2d at 1295. The majority goes further today than we went in *Riha v. Jasper Blackburn Corp.*, 516 F.2d 840, 843-845 (8th Cir. 1975). Certainly it goes further than we said we would go in *Johnson*.

I also have grave doubts about some of the matters considered by the trial court in computing the contributions Mr. Heiman would have made to his family. These included: 1) consideration of the salary the decedent had earned eight to ten years before his death in a business unrelated to his livelihood at the time of the accident, 2) consideration of a "management fee" of 5-6% of the value of apartments owned and operated by the decedent after finding that he probably would have lost 75% of those real estate holdings, had he lived, 3) considering living expenses of the Heiman family which were incurred after Mr. Heiman's death in order to show what the decedent would have been able to contribute.

Under the circumstances, I do not think an award of over $512,000 was appropriate. Accordingly, I would remand this case to the district court with directions to dismiss Marine Development as a defendant and for reconsideration of the question of damages.

A true copy.

Attest

Clerk, U. S. Court of Appeals, Eighth Circuit

APPENDIX G

In the United States District Court
Eastern District of Arkansas
Western Division

Mrs. Alana G. Heiman in her own right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, her Mother and Next Friend; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max Heiman, Deceased

Plaintiffs

v. No. LR-73-C-261

Boatel Company, Inc., Marine Development Corporation, and Medlin Marine, Inc.

Defendants

Kohler Co.

Third-Party Defendant

Memorandum Opinion

The defendants, Medlin Marine, Inc. and Marine Development Corporation, have now submitted very able briefs to the Court, arguing their differing views concerning the law of indemnity and contribution as applied to the findings and conclusions heretofore made by the Court. The issues tendered have become of utmost important to the parties because of the bankruptcy of the defendant manufacturer, Boatel Company.

The very strong and immediate reaction of the Court upon reading the briefs of these two parties is that neither result contended for would work justice in this case. On the contrary, to accept the position of either would, in the opinion of the

Court, result in an extremely unjust apportionment of the financial responsibility arising out of the joint and several liability of these defendants to the plaintiffs. It is true that the Court has heretofore apportioned the fault predicated upon negligence as between the two defendants held to be negligent, i.e., Boatel and Marine Development, but it has not made any determination of the comparative fault between the defendant Medlin and the defendant Marine, or any other defendant. The basic fallacy of Marine's position is that Medlin, because of its legal relationship with Boatel, should at the very least stand in the shoes of Boatel in terms of any apportionment of fault. From all that has been said in open court and in the prior Memorandum Opinion, it should be quite clear that, on any scale, the fault of Boatel far exceeded that of Medlin. On the other hand, the error of Medlin is in assuming, because of the Court's finding that Medlin's liability was one based simply upon Medlin's legal position as the retailer of the boat, that Medlin is "without fault". The truth is that the law of strict liability implies fault. Medlin chose to deal with Boatel and to place the latter's products in the hands of the public. In other words, Medlin sells to the public instrumentalities which, if they are defective, have a great potential for harm. The policy of the law is indeed reflected in the very theory of strict liability.

After analyzing the precedents cited by both Medlin and Marine the Court is convinced that we are dealing with a problem of contribution among tortfeasors rather than the question of tort indemnity. [The problem, however, is that we are called upon to compare the fault of one held liable on a theory of strict liability with the fault of another held liable on a theory of negligent failure to warn.]

One thing is clear from the facts of the case: the principal "culprit", the principal wrongdoer in this tragedy, was obviously Boatel. Whether you examine Boatel's responsibility on the basis of strict liability, implied warranty, or negligence, that

liability and its predominating causative relationship to the death and injuries here is obvious, clear and certain. If it is open to the Court to determine where the loss should rest as between the two other defendants whose fault is so much less, relatively, than Boatel, then the Court would find it most difficult to find greater fault on the part of one than the other, viewing "fault" in the light of the facts and the policies and attitudes reflected in the law concerning negligence and strict liability.

After examining the precedents submitted, the Court has concluded that it is open to the Court to apportion the loss between the two financially responsible defendants in accordance with the facts of the case. Those facts have been adequately found and treated by the Court from the bench and in the prior written memorandum. From a review thereof, the Court concludes that the fault of Marine and Medlin is equal.

Dated this 5th day of May, 1975.

/s/ GARNETT THOMAS EISELE
United States District Judge
Filed May 5, 1975

APPENDIX H

In the United States District Court
Eastern District of Arkansas
Western Division

Alana G. Heiman; Sandra Jean Heiman; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession with Will Annexed of the Estate of Max A. Heiman, Deceased,

Plaintiffs,

vs. No. LR-73-C-261

Boatel Company, Inc.; Marine Development Corporation; Medlin Marine, Inc.; and Kohler Co.,

Defendants.

Judgment

On February 5, 1975, the above cause comes on for trial in admiralty before the Court, the plaintiffs appearing by their counsel, Henry Woods and Steele Hays, the defendant Medlin Marine, Inc. by its counsel, William H. Sutton, the defendant Marine Development Corporation by its counsel, Phillip Carroll, and the defendant Kohler Co. by its counsel, William R. Overton and Gordon S. Rather, Jr. The defendant Boatel Company, Inc. does not appear and has not filed a responsive pleading in this cause. All parties present having announced ready for trial, the plaintiffs' counsel announces in open court that it desires to dismiss its cause of action against Kohler Co., which the Court thereupon entered with prejudice, but the cause continues against Kohler on the cross claims of defendants Medlin, Marine, Inc. and Marine Development Corporation.

Testimony began on February 5, 1975, continued through February 11, 1975, and resumed on February 26, 1975, continued through March 4, 1975, at which point all the parties rested. The Court thereupon made its findings of fact and dictated them into the record in open court and on March 7, 1975, a Memorandum Opinion was filed by the Court. Since the filing of such Memorandum Opinion, it has come to the attention of the Court that it misunderstood the testimony concerning the future life and work expectancies of the decedent; such future work expectancy is found to be 21.6 years and such future life expectancy is found to be 22.6 years. Based upon the findings of fact and the Memorandum Opinion, it is the judgment and order of the Court that the plaintiffs H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators of the Estate of Max A. Heiman, deceased, do have and recover from the defendants Medlin Marine, Inc., Marine Development Corporation and Boatel Company, Inc., on behalf of the wife, children and estate of Max A. Heiman, the following amounts:

Alana G. Heiman, wife	$443,762.07
Sanda Jean Heiman, daughter	41,536.33
Judith Heiman Samuel, daughter	21,000.00
Estate of Max R. Heiman	5,096.85

Judgment is therefore entered jointly and severally on behalf of said co-administrators against defendants Medlin Marine, Inc., Marine Development Corporation and Boatel Company, Inc. in the amounts set forth above.

In open court, the attorneys for all parties agreed that Sandra Jean Heiman had attained her majority while this action was pending and the Court does therefore find that she is now entitled to have judgment individually in her own right and that the style of this action has been amended accordingly.

It Is Further Ordered and Adjudged that Alana G. Heiman, for her personal injuries, do have and recover the sum of

Twenty Thousand Eight Hundred Ninety-three and 50/100 Dollars ($20,893.50) from Medlin Marine, Inc., Marine Development Corporation and Boatel Company, Inc., and judgment is hereby entered jointly and severally against those defendants for such amount.

It Is Further Ordered and Adjudged that Sandra Jean Heiman, for her personal injuries, do have and recover the sum of Seventeen Thousand Five Hundred Thirty-seven and 88/100 Dollars ($17,537.88) from Medlin Marine, Inc., Marine Development Corporation and Boatel Company, Inc., and judgment is hereby entered jointly and severally against those defendants for such amount.

It Is Further Ordered and Adjudged that each of the above amounts for which judgment was granted shall bear interest at the rate allowed by the laws of the State of Arkansas in accordance with 28 U.S.C.A. § 1961. It was agreed in open court by the attorneys for all parties to this action that each of the above amounts for which judgment was granted shall bear interest from March 12, 1975.

The cross complaints by Marine Development Corporation and Medlin Marine, Inc. against Kohler Co. are dismissed. The relative degree of fault between the defendants Boatel Company, Inc. and Marine Development Corporation is assessd as follows:

Boatel Company, Inc.	80%
Marine Development Corporation	20%

Medlin Marine, Inc. is hereby granted a judgment in indemnity against the defendant Boatel Company, Inc. for all amounts for which judgment against Medlin Marine, Inc. has been awarded herein in favor of the plaintiffs. The Court however reserves all questions of indemnity and contribution as between Marine Development Corporation and Medlin Marine, Inc. for future determination.

Costs are awarded in favor of the plaintiffs and defendant Kohler Co.

GARNETT THOMAS EISELE
United States District Judge

Date: March 14, 1975

Approved as to Form:

(Illegible)
Attorney for Plaintiffs

WILLIAM H. SUTTON
Attorney for Defendant
Medlin Marine, Inc.

PHILLIP CARROLL
Attorney for Defendant
Marine Development Corporation

WILLIAM R. OVERTON
Attorney for Defendant
Kohler Co.

APPENDIX I

In the United States District Court
Eastern District of Arkansas
Western Division

Mrs. Alana G. Heiman in Her Own Right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, Her Mother and Next Friend; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession With Will Annexed of the Estate of Max Heiman, Deceased,

Plaintiffs,

v. No. LR-73-C-261

Boatel Company, Inc., Marine Development Corporation, and Medlin Marine, Inc.,

Defendants,

Kohler Co.,

Third-Party Defendant.

Memorandum Opinion

Although the trial of this cause lasted about ten days, most of the basic facts are undisputed as will be revealed by an examination of the record. Because of the pressure of time and judicial business, the Court must content itself with making the essential findings with respect to disputed issues of fact and the necessary conclusions of law, providing in the process only a minimum of background information.

On September 1, 1973, Mr. Max Heiman, Mrs. Alana Heiman, his wife, and Miss Sandra Heiman, his daughter, went on an outing in Mr. Heiman's 47 ft. Islander yacht on the Arkansas River. On leaving the Little Rock Yacht Club, Mr. Heiman radioed Mr. Harry Ehrenberg, who was upriver in his own

boat and who had previously recommended a beach rendezvous site to Mr. Heiman. Mr. Heiman asked Mr. Ehrenberg how to get to the site, which was located one-quarter to one-half mile past Palarm Creek on the way up the river. Mr. Ehrenberg advised that it was somewhat difficult to find, and he therefore volunteered to take his runabout out onto the river and lead Mr. Heiman to the island where other boats had already assembled. This he did, and Mr. Heiman brought his boat to the island and beached it to the south of the other yachts. There were approximately five boats in all that were beached along the east side of the island. Mr. Heiman's was the southernmost. The bow of the boat rested on a very gentle slope in a manner which did not lower the rear of the boat more than two or three inches further down in the water than it would be if floating free.

That evening before dinner, the Heimans came ashore and visited others on the boats to the north of them. The various groups then returned to their own boats to dine. After dinner the Heimans watched a football game and thereafter Mr. Heiman came ashore again and walked his dog. He told Mr. Ehrenberg that he did not wish to go fishing the next day, but intended to rest. The Heimans retired about 10:30 on the evening of September 1.

On the morning of September 2, the Ehrenbergs and others in the group were fishing and visiting up and down the line of boats and getting ready for a fish fry. Later on, Mrs. Ehrenberg became concerned since she had not observed any activity on the Heiman boat. She insisted that Mr. Ehrenberg go over to the boat to invite them to join the others. Mr. Sam Winstead and Mr. Ehrenberg boarded the Heiman yacht, but could not arouse anyone or open the door. Mr. Winstead pried the sliding glass door open with a screwdriver, and he and Mr. Ehrenberg rushed in. Mr. Winstead turned off the generator, and they both then ran out for air. They immediately re-entered and

found Mr. and Mrs. Heiman on the two beds in the rear living compartment. Mr. Heiman was apparently dead. They managed to get the Heimans out on the open deck. Mrs. Heiman rolled her eyes and Sandra spoke once, but each then lapsed back into a coma. Since Mr. Winstead had the fastest boat, the Heimans were placed upon it and it returned with them to the Little Rock Yacht Club. The Heiman yacht was piloted back to the Little Rock Yacht Club by Mr. Dick Herget, who entered the Heiman vessel with a deputy sheriff. Everyone was instructed not to disturb anything on the boat. When the boat was back at the Little Rock Yacht Club, Mr. Herget locked it and delivered the keys to Mr. Buddy Payne. Mr. Payne kept the boat locked thereafter, only opening it at the direction of the attorneys.

Contributory Negligence of Mr. and Mrs. Max Heiman and Sandra Heiman

The defendants have contended that Mr. and Mrs. Max Heiman and Sandra Heiman were contributorially negligent. A contrary finding has already been made of record in open court. An additional point, probably, needs to be made. The defendants suggest that if the craft is anchored in open water it will weather-vane with the wind and this would avoid the precise problem which occasioned the death of Mr. Heiman and the injuries of Mrs. Heiman and Miss Sandra Heiman. The short answer to this is that all who were involved in the manufacture, sale and operation of such craft knew, and know, that they will be frequently beached for recreational purposes rather than anchored in open water. Further, if the carbon monoxide hazard was known, or should have been known, and the safeguard against same was to be the requirement that the boat always be anchored in open water where it could freely pivot 360 degrees, then obviously a clearcut instruction and warning to this effect would be required. None was given or suggested.

Boatel Liability

The Court made most of its findings of fact and conclusions of law with respect to the liability of the various parties in open court the day after the conclusion of the trial. The following findings and conclusions are supplementary to those stated from the bench and must be read in conjunction therewith to be properly understood.

The defendant Boatel Company, Inc. sold its product, the 47 ft. Islander, to the defendant Medlin Marine, Inc. in defective condition, unreasonably dangerous to the potential purchaser and likely users. At the time of the sale, Boatel was engaged in the business of selling boats and yachts, and the 47 ft. Islander yacht which was sold by it to Medlin Marine, Inc. and thence to Mr. Max Heiman was a standard production item. As was expected, the boat did reach the purchaser, Mr. Max Heiman, and the other likely users of that boat, without substantial change in the condition from that which existed at the time it left the manufacturing plant in Mora, Minnesota. The product was so dangerous and hazardous, as delivered to Medlin Marine and as delivered to Mr. Max Heiman, that no prudent manufacturer or seller would have marketed it had it been aware of the defective conditions and their potential. The defective conditions have heretofore been stated in open court, and those conditions were proximate causes of the death of Mr. Max Heiman and the injuries sustained by Mrs. Alana Heiman and Miss Sandra Heiman.

Kohler Liability

On the day after the completion of the trial, the Court made findings of fact and conclusions of law with respect to various liability issues. It concluded that Marine Development Corporation was liable to the plaintiffs, but it did not make a determination as to the liability of the Kohler Company. Rather, the Court on that occasion made certain factual findings concerning the role of the Kohler Company, but expressly reserved the issue of Kohler's liability for further study. At this time the Court supplements its findings of fact and conclusions of law with respect to Kohler's liability as follows:

The third-party defendant, Kohler Company, knew, or had reason to know or believe, that its gasoline-driven generator would be installed in the engine compartment of a boat manufactured by Boatel and, further, that such boat would have sizeable holes or openings in the forward wall of the engine compartment. Kohler also knew, or had reason to know or believe, that its generator unit might very likely be integrated with, and used together with, a recirculating air conditioning system. Kohler also knew, or had reason to know or to believe, that leaks do occasionally develop in the exhaust systems of marine generator engines resulting in the direct discharge of carbon monoxide into the engine compartment. It also knew that these leaks could occur through accident or ordinary wear and tear. And, of course, it is undisputed that Kohler sold the engine that produced the carbon monoxide that resulted in the death and injuries in this case, and Kohler was fully aware of the fact that its engine would produce carbon monoxide and that that gas was potentially lethal.

The only real liability question in connection with Kohler is whether it had a duty to warn and, then, if it did have such a duty which it failed to discharge, was the breach of that duty a proximate cause of the death and injuries in this case?

There was evidence in this case that carbon monoxide in the engine compartment would probably diffuse and flow through the openings in the engine compartment forward wall whether there was an air conditioning system on the boat or not. There is even testimony that if there were lethal concentrations of carbon monoxide in the engine compartment that lethal concen-

trations would eventually build up in the living compartments even in the absence of an air conditioning system. In the Court's judgment, however, the evidence did not, and does not, support a finding that concentrations of carbon monoxide which would be hazardous to life or health would penetrate into the living areas of a boat in the absence of an improperly installed air conditioning system.[1] When the generator engine is operating, it creates a negative pressure in the engine compartment since it demands a source of air and oxygen. Of course, if there were a sufficient leak directly from the exhaust system into the engine compartment, positive pressures could be created which could result in an outflow of carbon monoxide into the living quarters.

The key question here is whether the Kohler Company had reason to know, understand, and believe that the presence of carbon monoxide in the engine compartment could be potentially hazardous to the occupants and users of the boat in the living compartments of the boat. If so, it could be argued that it should have warned against any foreseeable circumstance which would permit the introduction of carbon monoxide into that engine compartment, and, again if it had that knowledge, then it should warn the manufacturer and the potential users of the potential, through accident or wear and tear, of a leak developing in the exhaust system *within* the engine compartment, and it would also have a duty to warn the boat manufacturer not to create entryways from outside of the boat in the vicinity of the exhausts which would permit the *reintroduction* of the carbon monoxide into the engine compartment. Here, Kohler argues, in effect, that it gave such a warning when its manual stated, "never put inlets in the transom". It has already been stated in open court that this language would avail

[1] It should be noted, and the Court so finds, that there is no significant difference in the airflow situation in the case of a properly installed recirculating air conditioning and heating system from that which obtains in the complete absence of an air conditioning and heating system.

Kohler little because, taken in appropriate context, it obviously referred to the proper construction of the ventilation system, and the inlet ventilators, which are designed to operate while the boat is in motion, obviously would not work if installed on the transom. But, even assuming the language was intended to guard against the very thing that Boatel in fact did here, was it adequate as a *warning* as contrasted to its adequacy as a construction instruction. If this were the sole issue, the Court would have to resolve it against Kohler in the same fashion that it resolved a similar argument against Marine Development Corporation, because, clearly, the language does not suggest in any way the potential hazard to life and health that might result from the failure to follow the instruction.

All this brings us back to the most difficult question: "knowing that carbon monoxide might be in the engine compartment as a result of the operation of its generator engine at some time during the life of the boat, and knowing that there were openings from the engine compartment communicating directly with the living areas of the boat, did Kohler have a duty to warn Boatel not to put holes in the exterior of the boat in the vicinty of the engine exhausts, which holes would directly communicate with the engine compartment, and to further point out that to do so might have the effect of producing death or injuries to those occupying the living spaces of the boat. The answer to this question must turn on the further question: did Kohler know, or should it have known, that an air conditioning system, improperly installed, or however installed, might pump carbon monoxide out of the engine compartment and into the living areas of the boat." On the basis of the evidence, the Court must find that Kohler did not know of this effect (indeed, none of the parties did until after the accident) and it further finds and concludes that it had no duty to know, or reason to know, of this potential. To hold otherwise would charge the manufacturer of a generator with the unreasonable requirement of having to be intimately aware of the tendencies and propen-

sities and nature of *all* appliances and systems that might take electric energy from a generating unit. The Court concludes, while recognizing that the question here is a close one, that the law does not go that far and, therefore, that Kohler had no duty to warn Boatel which could form a predicate for liability against it in this case.

Upon the basis of the same analysis, the Court must conclude that Kohler had no duty to warn or recommend that the bilge blower be operated continuously when the generator engine or the other engines were operating and the boat was *not* under way. Until the post-accident analysis of this case, at any rate, the purpose and function of the bilge blower was considered by all to be simply a method of *ventilating* the engine compartment for the purpose of eliminating potentially explosive fumes. It was not conceived by anyone that it would have any relationship to the potential carbon monoxide problem.

Damages

The United States Supreme Court in *Sea-Land Services, Inc. v. Gaudet*, 414 U.S. 573, 584, states that, under the maritime wrongful-death remedy, the decedent's dependants may recover damages "for the loss of support, services, and society, as well as funeral expenses". It then goes on to discuss these elements of damages:

> "Recovery for loss of support has been universally recognized, and includes all the financial contributions that the decedent would have made to his dependents had he lived. Similarly, the overwhelming majority of state wrongful-death acts and courts interpreting the Death on the High Seas Act have permitted recovery for the monetary value of services the decedent provided and would have continued to provide but for his wrongful death. Such services include, for example, the nurture, training, education, and

guidance that a child would have received had not the parent been wrongfully killed. Services the decedent performed at home or for his spouse are also compensable.

"Compensation for loss of society, however, presents a closer question. The term 'society' embraces a broad range of mutual benefits each family member receives from the others' continued existence, including love, affection, care, attention, companionship, comfort, and protection. Unquestionably, the deprivation of these benefits by wrongful death is a grave loss to the decedent's dependents."

* * * * * * *

"Finally, in addition to recovery for loss of support, services, and society, damages for funeral expenses may be awarded under the maritime wrongful-death remedy in circumstances where the decedent's dependents have either paid for the funeral or are liable for its payment."

As a footnote to its discussion of "loss of society," the Court made it clear that this element should not be confused with mental anguish or grief which are *not* compensable under the maritime wrongful-death remedy. It states that loss of society "entails the loss of positive benefits," while mental anguish or grief "represents an emotional response to the wrongful death."

A "dependent" for our purposes may be such beyond his or her legal majority and may be such independent of the legal responsibilities imposed by state law. This is particularly so with respect to certain "unfinished business" in the maturation process such as advanced, college-level education. Where the evidence discloses the intent and ability to pursue such an education on the part of a child of the decedent and the concomitant determination to, and ability to, provide such educational opportunities on the part of the decedent himself, then that child would remain a "dependant" for such purposes until completion of the educational process.

A. **Contributions**

From the evidence it is clear beyond question that Mr. Heiman was an exceptional person and an ideal husband and father. He occupied an important place in the civic and business life of the Little Rock community and the highest positions of lay leadership in his church. He was devoted to his wife and his daughters and always put their interests first. He was concerned with their welfare and did his utmost to shield them from life's difficulties and vicissitudes. He had an intense personal interest in the education of the daughters. He was a "family man" in the sense that his whole life revolved about his wife and daughters. The members of the family spent much more of their "free" time enjoying the companionship of each other than one would expect in the average family.

Although the status of Mr. Heiman's economic condition at the time of his death, based as it was upon income from a motel and from apartment complexes located in Arkansas and Florida, was precarious and deteriorating, it is likely that, had he lived, he would have salvaged at least some small part of his holdings. Mr. Heiman had broad family and personal contacts with influential and wealthy businessmen throughout the country, and he also had what appears to be an unusual ability to borrow money, considering the status of his overall financial condition. This is dramatically illustrated by the evidence indicating that he had arranged an additional $100,000 loan just a few days prior to his death.

Nevertheless, a fair interpretation of the evidence forces the Court to find that, had Mr. Heiman lived, he would have needed a combination of great effort and extremely good fortune to salvage even as much as a fourth of his overall holdings and that, realistically, it is more probable that, had he lived, Mr. Heiman would only have been able to extricate himself from his financial difficulties without any net personal obligation, salvaging only a small, perhaps even nominal, amount of his

business holdings. The Court must analyze the probable "contributions" element of damages with this finding in mind.

Mr. Heiman can be considered a victim of the times in the sense that practically all of the overall financial conditions and circumstances affecting the success of such investments went sour at about the same time. Beyond that, he possibly did not retrench when he should have. His concern for and interest in his family, and his hope, based more upon wish than reality, led him into the practice of using cash flow from depreciation as the basis for contributions to his family and his own living expenses. As a result, when conditions began to approach the critical stage, he did not have the necessary reserves to fall back upon to tide him over. This left him with only one possible recourse: to borrow more, and this alternative would itself become increasingly more difficult.

The evidence clearly establishes that Mr. Heiman was a man of business and executive ability. Before 1965 he had held positions of responsibility with one of the largest department stores in the State of Arkansas, the Gus Blass Company. The evidence from his W-2 forms indicates that his average annual income for the last three years he was with the Gus Blass Company (1963, 1964 and 1965) was in excess of $20,000. The compensation for performing similar services in 1975 would obviously be considerably in excess of that figure. The evidence of his ability to command executive-level compensation from third-party employers is clear and convincing. This, then, is another of the bases upon which the Court's decision concerning the amount and probability of future contributions must be predicated.

When Mr. Heiman got seriously involved in the real estate, motel and apartment building ventures, he devoted most of his time to personally overseeing such operations. He maintained an office with a secretary at the Holcomb Heights Apartments. It is true that he had on-the-site employees who looked after

the routine operations, the collection of rents, and maintenance. But, with the exception of the Fair Park Gardens, which were under a management arrangement with Block Realty Company, he contributed a considerable amount of his time to the overall management of the properties. The evidence indicates that, had Mr. Heiman not been performing these services, he would have had the alternative of contracting for such services with some real estate management company. The usual fee for such services would run in the neighborhood of five to six percent of the gross receipts. Of course, such a firm would have had to pay the management expenses and wages of the on-the-site employees out of its fees. Looking at Mr. Heiman's "tax records" covering his various operations over a period of years, the Court finds that he was performing services which, had they been contracted, would have required the payment of at least $20,000 per year over and above the management and employee expense actually experienced.

It is clear from the evidence that Mrs. Heiman had no knowledge of her husband's business affairs prior to his death, and it is also clear that Mr. Heiman shielded her from even the routine responsibilities of paying household bills and expenses. Therefore, she personally kept no records of, and has no knowledge of, the contributions made to her and the family prior to Mr. Heiman's death. The executors have found records kept by Mr. Heiman, however, which provide some insight into the contributions made to the family over recent years. In addition, Mrs. Heiman has kept an accurate record of her expenses since Mr. Heiman's death, and has testified that those expenditures have been in line with, and certainly not more than, those incurred in prior years. Looking at both Mrs. Heiman's testimony as to her actual expenses since Mr. Heiman's death and the tax records and other records kept by Mr. Heiman reflecting contributions prior to his death, the Court finds that on an average Mr. Heiman was contributing just under $30,000 to the living expense requirements of the entire family. In making

this determination, the Court has disregarded certain items, such as jewelry expenditures, from the figures testified to by Mrs. Heiman on the one hand, and, on the other hand, has reduced the figures revealed by Mr. Heiman's records by the amounts of the insurance premiums, the boat expense, and certain other expenses. Had he lived, Mr. Heiman's own living expenses would have had to be defrayed out of the total living expense contributions. Furthermore, if, as the Court suspects, financial circumstances would have required Mr. Heiman to accept employment from a third-party employer, he would, of course, have had to pay state and federal income taxes on his compensation, a situation which would be entirely different from the tax situation which had existed in the years immediately prior to his death where, because of the nature of his investments and the tax laws involved, he was not required to pay such taxes.

The Court is convinced that, had Mr. Heiman lived, he and his family would have had to cut down somewhat on their overall style of living but would still have been able to live most comfortably.

From all the evidence, the Court finds that through one method or another Mr. Heiman, had he lived, would have been able to provide and would in fact have provided contributions and support to the other members of his family (i.e., excluding himself) in the sum of $22,500.00 per year, measured in 1975 dollars, over the remaining working years of his life.

The plaintiffs put in evidence experience tables showing a 23.3 year life expectancy for a 48-year-old man. There was evidence indicating that Mr. Heiman had in the past suffered a heart attack, but there is no indication that he was not enjoying reasonably good health just prior to his death. From the evidence the Court finds that Mr. Heiman would have lived 21 more years and that he would have remained active as an economic producer for 20 years, calculated from the date of his death.

Since the Court is convinced that decedent would have paid the full costs of his daughters' college educations, it is obvious that during those years when such payments would be required, less would be available for the support of Mrs. Heiman. This situation would reverse, however, when the daughters had completed their educations and were either married or "on their own".

B. **Loss of services.**

Under the *Gaudet* case, *supra*, "services" would include the nurture, training, education, and guidance that Sandra and Judy would have received had Mr. Heiman survived, and would also include those services which he would have performed at home or for his wife. With respect to the former, the Court must find and conclude that both Sandra and Judy actually received nurture, training, education, and guidance from their father over the really important formative years of their lives. They now possess in their personalities the benefits of those important contributions to their lives. That Mr. Heiman would have continued to provide guidance, had he lived, is equally obvious. The point is, however, that the "twig had already been bent" and that Mr. Heiman's future contributions in this respect would have been more on the basis of the mutual interchange one finds among equal adults in a family unit. The Court is assessing some damages for this loss, while recognizing that it was minimal under the circumstances. The Court fixes the lump sum of $1,000.00 as the present value of such loss to Judy Heiman and the sum of $2,000.00 as the present value of such loss to Sandra Heiman, taking into consideration the difference in the ages and status of independence of the two girls at the time of Mr. Heiman's death.

The situation is different with respect to Mrs. Heiman. The evidence indicates that Mr. Heiman provided much in the way

of personal services for Mrs. Heiman and for the support of the homeplace itself. He worked around the house, kept the family's books, paid the family's bills, and provided much in the way of direct assistance to his wife. The Court finds that the reasonable value, on an annual basis, of such services would amount to $1,000.00 in 1975 dollars and that such services would have continued for the balance of Mr. Heiman's life.

C. **Loss of Society.**

The *Gaudet* case, *supra*, makes it clear that the decedent's dependants are entitled to recover for "loss of society" which, according to the Supreme Court, embraces a broad range of mutual benefits, including "love, affection, care, attention, companionship, comfort, and protection". Although it is difficult to place a value upon such things—most people feeling that it is impossible to measure such benefits in terms of dollars—still lump sum awards will be made to reflect those important losses in this case as follows:

1. For Mrs. Heiman	$35,000.00
2. For Mrs. Lou (Judy) Samuel	$10,000.00
3. For Miss Sandra Heiman	$15,000.00

D. **Funeral expenses.**

Finally, the *Gaudet* case makes it clear that a recovery is permitted for funeral expenses. The Court finds the funeral expense to be $5,096.85.

Damages of Mrs. Alana Heiman and Sandra Jean Heiman

Mrs. Heiman testified that she recalls that the family retired about 10:30 on the evening of September 1. The next thing

that she recalls is her awakening in the intensive care unit of St. Vincent Infirmary several days after the accident. From other evidence the Court determines that Mrs. Heiman first regained significant consciousness on September 5. She was not really clear of mind until September 6. As she regained consciousness, she found that it was difficult to breathe (a tracheostomy having been performed while she was still in a comatose state) and noticed that her hands were bound to the side of the bed. She was confused and became instinctively terrified. She was receiving fluids intravenously and had to be suctioned when she began to cough. As she regained awareness of the situation, she found that she was on a respirator. Her leg, in which she had phlebitis and in which she had received a transfusion, caused her pain. She recalls developing pneumonia, with attendant fatigue, coughing and pain in her chest.

She is aware that she developed cerebral edema and heart difficulties which occasioned numerous cardiograms.

Mrs. Heiman has made a remarkable recovery, considering her close brush with death. She has continuing difficulty with her leg, which swells when she is on it for any length of time. When the leg swells, it causes pain. She has experienced no continued difficulty as a result of the tracheostomy except an occasional feeling of "drawing" or tension in her throat. Psychologically she has not made as complete a recovery. She still is extremely nervous and, on occasion, becomes emotionally upset. She finds that she cries quite frequently, but is trying to fight off these emotional residuals. She is, according to her own testimony and the testimony of her doctor, coping quite well with these difficulties.

When Sandra Heiman first regained consciousness several days after the accident in the intensive care unit of the hospital, she, too, was very frightened. There were needles in her arms and she had trouble breathing and talking. Her knees were

swelling and causing considerable pain. As indicated in the discussion of Dr. Levy's testimony below, Sandra has made a remarkable recovery, but she does have some residuals. She finds that she tires much more quickly now than before the accident, feeling that she has somewhat limited breathing capacity. Her voice is lower and cracks on occasion as a result of the tracheostomy and treatment while in the hospital. She still has a numb place on her leg.

Emotionally, Sandra finds that she still cries more often than before, but it is evident to the Court, as it was to Dr. Levy, that she is getting control of this situation.

It would be well at this time to discuss briefly the relationship between Sandra and her father. Theirs was a particularly close relationship. Sandra was a real "tomboy" and enjoyed fishing, shooting skeet, and watching football games with her father. She helped Mr. Heiman do such things as reloading his shells and he, in turn, taught her how to drive an automobile. In sum, there was a close, warm, affectionate relationship between Sandra Heiman and her father that was obvious not only to Sandra and her father but also noted by the rest of the family and the family's friends.

Dr. Jerome Levy was the physician in charge of the handling of Mrs. Heiman's case and Sandra Heiman's case. The Court was most favorably impressed by the testimony of Dr. Levy. That testimony reflected that nice balance of personal concern for his patients and complete professional objectivity. He was not cross-examined by any of the attorneys for the defendants.

Dr. Levy is principally an internist. He first saw Mrs. Heiman around 4:00 p.m. on September 2. (She had been earlier attended by Dr. John Samuel in the emergency room. Dr. Samuel is now deceased.) He found Mrs. Heiman unconscious and

in a form of shock. She showed evidence of brain injury and her pulse was rapid, although her blood pressure was normal. When admitted, Mrs. Heiman's lungs were clear and her breathing was satisfactory. He assessed her overall condition as critical due to carbon monoxide poisoning and sought consultation with Dr. John Schultz, who was well-trained in respiratory problems, and Dr. Howell, a neurologist. Dr. Schultz was called in because Mrs. Heiman soon developed difficulty in breathing. Dr. Howell was called in because of the fear of possible brain damage or injury. As the breathing difficulty developed, it became obvious that a tracheostomy would have to performed, and Dr. Stewart, a chest surgeon, was called in for this purpose.

The breathing problem which developed is a form of respiratory failure. The collection of fluid in the tissue blocks the oxygen distribution. Oxygen was administered and the tracheostomy permitted a satisfactory air exchange. Nevertheless, Mrs. Heiman developed pneumonia. The carbon monoxide soon produced cerebral edema in Mrs. Heiman. Although the precise mechanics of causation are not known, the lack of oxygen available to the tissue causes fluids to develop in the cells and between the cells with consequent swelling. This is treated by the tracheostomy and provision for pure oxygen heretofore mentioned, and also by the use of dexamethasone, a steroid which mobilizes the fluid permitting it to get into the bloodstream and thus to be carried away.

About the time the doctors began to make progress with the cerebral edema, they noted difficulties with Mrs. Heiman's heart. Some areas of the body are particularly susceptible to damage due to loss of oxygen. The brain, lungs, heart and kidneys are the critical organs. Heart tissue and cells become weak and do not function properly because of lack of oxygen. Dr. Levy testified that Mrs. Heiman did sustain injury to her heart reflecting myocardial damage. This condition was treated by rest, oxygen and the use of a drug which regulated Mrs. Heiman's

blood pressure. The heart condition steadily improved, but it was several months before Dr. Levy found the heart muscle restored to its normal strength and condition.

Mrs. Heiman was in the hospital from September 2 to September 15, most of the time in intensive care.

The first day that Mrs. Heiman's mind was clear was September 6. On that occasion she asked about Mr. Heiman, and Dr. Levy told her the truth.

Dr. Levy has followed Mrs. Heiman since her discharge from the hospital and has found that she has progressed very well under the restrictions imposed by him. After approximately six months, her physical condition stabilized, leaving her with only minor physical residuals. She still has trouble with the blockage of the vein in her leg resulting from the aggravation of her phlebitis condition, but Dr. Levy is convinced, overall, that she has done extremely well. Dr. Levy indicates that it will take longer for Mrs. Heiman to attain complete relief from the emotional and psychological results of her injuries, but he is convinced that she is making a determined effort in this connection.

Although Mrs. Heiman has made a remarkable recovery, it is equally clear to the Court that she suffered great mental and physical pain as a direct result of her exposure to the carbon monoxide.

Dr. Levy also handled Sandra Heiman's case. Sandra was 17 at the time of the accident and was just preparing to enter her senior year in high school. Miss Heiman's symptoms and difficulties paralleled those of her mother, but in some areas were worse, according to Dr. Levy. She developed an almost fatal complication relating to her renal system. At the very time when she was recovering from the same cerebral edema and

heart conditions as those suffered by her mother, she had a kidney failure which approached a uremic state. However, she was treated for this condition and fortunately snapped back, and thereafter proceeded steadily on the road to recovery. Sandra also suffered from acute respiratory failure which also required a tracheostomy. A respirator was used to assist her to breathe, just as in the case of her mother. She also was discharged from the hospital on September 15.

Dr. Levy states that the brain, heart, lung and kidney conditions suffered by Sandra Heiman have been restored and repaired by nature's efforts since then. Sandra, too, noted her own remarkable recovery as far as her physical condition is concerned. The main residual, according to Dr. Levy, is that resulting from emotional shock. Even in this area, it appears that she has made good progress although, as expected she experiences some relapses on occasion. It is clear from the evidence that Sandra has suffered no permanent brain damage. She is making an excellent scholastic record in college.

The Court finds the reasonable value of the medical and hospital services rendered to Mrs. Heiman to be $5,893.50 and the reasonable value of such services for Sandra Heiman to be $5,037.88.

For all other appropriate elements of damage for their personal injuries, the Court finds that Mrs. Heiman is entitled to the sum of $15,000.00 and Miss Sandra Heiman is entitled to the sum of $12,500.00.

Besides Sandra Heiman, the Heimans had only one other child, Judy, who is now Mrs. Lou Samuel. Judy was at the University of Arkansas at Fayetteville when she learned of the tragedy. She immediately came home and did not thereafter return to the University at Fayetteville.

Judy, too, had a very special and close relationship with her father. When Judy was at Sophie Newcomb College in New

Orleans, her father talked to her by long distance telephone from his office at least once a week. Whenever he went to Florida to check on his business investments, he would detour through New Orleans so he could visit Judy. In addition, Mr. and Mrs. Heiman both made frequent trips to New Orleans to visit their daughter.

Judy was engaged to be married at the time of the accident. Mr. Heiman made several trips with her about the country so that she might find a wedding dress that they both liked. Such episodes simply illustrate the basic relationship.

To further detail that evidence which so clearly shows the strong mutual happy feelings of love, concern, understanding and warm affection which characterized this strong family unit would serve no useful purpose. What has been said should suffice.

Damages—inflation factor

The Court is convinced that the law permits, and realism requires, the assessment of any reasonably probable inflationary or deflationary trend over the future years in which it is found that contributions would have been made or services would have been rendered by a decedent. Where a proper evidentiary basis is laid, the Court should consider such trends and their effect upon the purchasing and earning power of the dollar. The Court was impressed with the testimony of Dr. Floyd Durham, a professor of economics at Texas Christian University. While not agreeing with certain of his findings and conclusions concerning future trends, the Court was impressed with his overall analysis thereof and has used that analysis, along with other evidence in the case, in reaching its own conclusion as to an appropriate adjustment in this case for inflationary trends.

The law requires the trier of fact to determine the *present* valuation of contributions which would have, had the decedent lived, been made over a period of future years. To get the present value, the trier of fact must determine an appropriate discount rate. On the other side of the coin, the trier of the facts should attempt to evaluate future inflationary trends in order to properly reflect the purchasing and earning power of the dollar over those same future years. Dr. Durham used a discount rate of 4½ percent and an inflationary rate of 5½ percent. The Court, on the other hand, finds that the more appropriate discount rate would be 5½ percent and the more appropriate inflation rate would be 4 percent considering the two decade projections we are working with here.

Indemnity

Medlin Marine, Inc. is entitled under the law to an indemnity judgment over against the defendant Boatel for all amounts for which judgment against Medlin has been awarded herein in favor of the plaintiffs.

Contribution among tortfeasors

The Court fixes and assesses the relative degree of fault between the defendant Boatel Company and the defendant Marine Development Corporation as follows:

Boatel Company	80%
Marine Development Corporation	20%

Filed March 7, 1975

[*1770] **APPENDIX J**

In the United States District Court, Eastern District of Arkansas, Western Division

Mrs. Alana G. Heiman in Her Own Right; Sandra Jean Heiman, by Mrs. Alana G. Heiman, Her Mother and Next Friend; and H. Maurice Mitchell and Joseph W. Gelzine, Co-Administrators in Succession With Will Annexed of the Estate of Max Heiman, Deceased,
Plaintiffs,
v.
Boatel Company, Inc., Marine Development Corporation, Kohler Company, and Medlin Marine, Inc.,
Defendants.
} No. LR-73-C-261

Trial

Before:

The Honorable Garnett Thomas Eisele,
United States District Judge

U. S. District Courtroom,
U. S. Post Office & Courthouse,
Little Rock, Arkansas,

March 4, 1975.

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* Numbers appearing in brackets in text indicate page numbers of original stenographic transcript of testimony.

[1771] Appearances

On behalf of plaintiffs:

HENRY WOODS, Esq., of
McMath, Leatherman & Woods,
711 West Third Street,
Little Rock, Arkansas; and

STEELE HAYS, Esq., of
Spitzberg, Mitchell & Hays,
300 Garner Place,
Little Rock, Arkansas.

On behalf of defendant Marine Development Corporation:

PHILLIP CARROLL, Esq., and
VINCE FOSTER, Esq., of
Rose, Nash, Williamson, Carroll & Clay,
720 West Third Street,
Little Rock, Arkansas.

On behalf of defendant Medlin Marine:

WILLIAM H. SUTTON, Esq., of
Smith, Williams, Friday, Eldredge & Clark,
1100 Boyle Building,
Little Rock, Arkansas.

On behalf of defendant Kohler Company:

WILLIAM R. OVERTON, Esq., and
GORDON S. RATHER, Esq., of
Wright, Lindsey & Jennings,
2200 Worthen Bank Building,
Little Rock, Arkansas.

[1772] PROCEEDINGS

The Court: Good afternoon.

Mr. Woods.

Mr. Woods: Your Honor, I would like to introduce this stipulation. I don't guess it's necessary to read it. The Court and all the parties have copies of it. I will just introduce it as an exhibit. I'll be glad to read it.

The Court: This had to do with damages?

Mr. Woods: Yes, sir.

The Court: It will be received in evidence as a stipulation.

Mr. Sutton: Your Honor, I think I speak for all the defendants in saying that we do not object to the evidence not being authenticated any more than what it is. This is what the stipulation goes for, as far as we are concerned. We do object to it on the grounds of relevance and on the grounds of not being properly introducible at this time and as not being a proper support of any loss of contributions that it might be offered to prove.

The Court: Well, the Court is permitting it to be introduced out of time, and the other objections will be overruled. It will be received as the other evidence in the case.

Mr. Overton: I join in that objection.

Mr. Carroll: Marine joins.

[1773] The Court: All the defendants object to the receipt on the basis stated by Mr. Sutton.

This will be Plaintiff's Exhibit 73, and it is received.

(The document referred to was marked for identification as Plaintiff's Exhibit No. 73, and was received in evidence.)

Mr. Overton: Your Honor, after all the evidence is completed, the defendant Kohler would like to renew its motions for directed verdict on each of the cross complaints against it.

Mr. Sutton: Likewise for Medlin Marine. We would also move that all is pleadings conform to the proof in the case.

The Court: I am going to permit all the pleadings to be conformed to the proof that has been received.

Mr. Carroll: Marine makes the same motion, Your Honor, in its behalf.

The Court: Very well. All the motions have been received. Their resolution really will be part of the general findings and conclusions that the Court reaches in the case.

"I have not been able to make the progress I hoped I could, but I have made some substantial progress and since you are all here I intend to give the benefit of what I have **[1774]** accomplished as far as I have gone.

I am not today making any findings with respect to damages; although, as you will note presently, those issues are very much before the Court and I did spend some time on those issues today, perhaps at the cost of the business at hand.

I am making these findings but I may well file additional findings, even with respect to the issues covered here. I may supplement these findings in a memorandum since a memorandum will have to be filed covering other issues anyway."

I want to start by stating certain conclusions of law, particularly with respect to matters that I do not believe are subject to any real controversy and where the underlying facts are quite clear.

(A) Boatel is liable to the plaintiffs on the bases of strict liability and negligent design.

(B) Medlin Marine, Incorporated is liable to the plaintiffs on the bases of strict liability and implied warranty.

There is no negligence or carelessness on the part of the decedent, Mr. Max Heiman, or on the part of Alana G. Heiman or Sandra Jean Heiman which caused or contributed to the death of Mr. Heiman or to the injuries and damages sustained by Alana Heiman and Sandra Jean Heiman.

The Court further concludes that the liability of the defendant Medlin Marine, Incorporated is based upon the legal relationships existing between it and the manufacturer, **[1775]** on the one hand, and between it and Mr. Max Heiman on the other.

There is no separate and independent basis for liability of Medlin Marine to the plaintiffs based upon the acts or omissions of Medlin or any of its agents or employees. In this connection the Court finds that none of the representatives of Medlin—any of its agents or employees—knew or should have known of the four holes on the underside of the transom of the Heiman boat prior to the accident.

Now this is probably not really in dispute, but I want to make this finding. There is no evidence to indicate that either Mr. Heiman or anyone else ever spent a night on the yacht prior to the night of September 1, 1973. There is no evidence to indicate or to suggest that the generator, air-conditioning system on the yacht was ever, prior to September 1, 1973, operated for any substantial period while the vessel was moored, beached, or anchored.

In fact, the evidence is to the contrary, indicating this was the first and only night the Heimans ever spent on the yacht and the first and only occasion during which the generator, air-conditioning systems were operated together for an extended period of time while the boat was stationary.

The night in question was, according to Mr. Eherenberg—and the Court so finds—was ideal. The water was calm. There was a slight breeze from the east, which would mean that it approached the Heiman boat from the stern.

[1776] Now I am going to make what might be called "miscellaneous findings of fact," because they are not really tied together in any narrative form, in response to the requests and suggestions of the parties. Of course, it's going to be necessary that these findings be integrated in with and related to the other findings that I am going to make today and perhaps later.

Considering the arrangement of the boat and its equipment as it existed on September 1, 1973, a substantial risk existed that discharged engine exhaust gases would be drawn back into the engine compartment through the four water drain holes when the generator engine alone was operating.

This process would be accelerated when the forward air-conditioning system was activated. This would be so, even with the sliding door entirely open; but the tendency would be increased as the sliding door was progressively closed.

There are direct air passages, significant in size, between the engine compartment and the other areas of the yacht as a result of openings in the forward wall of the engine compartment. The largest of these openings is next to the upper starboard wall of the engine compartment. There is a smaller opening at a similar location on the port side. In addition, there is a tiny crack around the thermostat which is used to control the heater in the engine compartment.

On the night in question carbon monoxide from the **[1777]** generator engine was exhausted into the water immediately under the overhang portion of the transom. The carbon monoxide, which is slightly lighter than air and which was also warmer that the ambient air, was propelled out of the water directly under the transom where it was drawn through the four holes in the transom into the engine compartment by the negative pressure being created in the engine compartment by the operation of the generator and the air-conditioning system.

High concentrations of carbon monoxide developed in the engine compartment and were drawn forward, principally

through the right starboard opening in the engine compartment, into the equipment room where the carbon monoxide entered the forward cooling unit from which it was discharged into the forward living areas and then circulated by both air-conditioning units throughout the yacht.

The buildup of the carbon monoxide in the living quarters resulted in the death of Mr. Max Heiman and the injuries to Mrs. Heiman and Sandra Heiman.

A completely airtight bulkhead between the rear cabin and the engine compartment of the Heiman yacht would have eliminated the hazard of introducing carbon monoxide from the generator engine into the living quarters of that vessel.

The introduction of an appropriately designed arrangement which would induce fresh air into the air-conditioning system at the proper point could have virtually eliminated the **[1778]** hazard of introducing lethal quantities of carbon monoxide into the living quarters of the vessel.

This simply means that positive pressure can be designed into an air-conditioning system which will have the effect of causing an outflow rather than an inflow of air from the engine compartment. Such a system would probably require larger air-conditioning tonnage and consequently cost more to obtain the same cooling and heating effect as a recirculating system.

It should be noted, however, that elsewhere in my findings I have found that there is nothing inherently or per se hazardous in the use of a properly installed recirculating system on a boat such as Mr. Heiman's.

Leaks do occasionally develop in the exhaust systems of marine generator engines and in the exhaust systems of marine propulsion engines, resulting in the direct discharge of carbon monoxide into the engine compartment, and this fact was known by or should have been known by the defendants and third-party defendant, Kohler.

The four holes in the transom of the Heiman yacht constitute a defect which was a proximate cause of the death of Max Heiman and the injuries to Mrs. Heiman and Sandra Heiman, and thus creates liability against Boatel and Medlin Marine on the basis of strict liability.

The location of the intake for the forward **[1779]** air-conditioner in the equipment room of the yacht, combined with the making of the openings in the engine room forward bulkhead and the location of such openings, together constitute a defect which was a proximate cause of the death of Max Heiman and the injuries to Mrs. Heiman and Sandra Heiman, thus creating liability against Boatel and Medlin Marine on the basis of strict liability and tort.

The defendant, Marine Development Corporation, did not design the air-conditioning as it is found and arranged in the Heiman boat. That design and arrangement was made and carried out by Boatel alone and was in direct violation of the clear and unambiguous installation instructions furnished by Marine Development.

The Court finds and concludes that there is nothing inherently or per se defective or hazardous in the use of properly installed recirculating air-conditioning systems.

Further, although there was evidence to the contrary, the Court finds that had the air-conditioning components provided by Marine Development been properly installed by Boatel in accordance with Marine's manual the Heimans would not have been harmed.

This finding must be limited to the facts of this case since the evidence suggests that under altered configurations such a system, even if installed according to the manual, might cause or contribute to such an accident.

[1780] Therefore, the difficult question concerning Marine's liability does not turn on any defects in its components—there were none—or upon its participation in the as-is design of the

Heiman air-conditioning system; but rather upon its duty to warn Boatel of the potential consequences of improperly installing its components, given its knowledge or imputed knowledge of the boat designs and given its overall business relationship with Boatel.

It is clear from the evidence that none of the parties to this action ever realized, prior to their investigations of this accident, the serious hazard which results from the improper location of the cooling units when combined with the circumstances that the bulkhead between the engine compartment and the living spaces of the boat is not airtight or even substantially airtight.

Still, the evidence is such that all of the defendants and the cross-defendant, Kohler Company, knew or should have known there was a risk—however slight—that carbon monoxide would, at sometime during the life of the vessel, be in the engine compartment.

The principal basis for this statement is not that any of the parties except Boatel knew or should have known that Boatel would design a drain system as it did, thereby providing direct access of carbon monoxide from outside the boat back into the engine compartment; but rather that such **[1781]** parties knew or should have known that carbon monoxide might, during the life of the vessel, escape from either the generator motor or from one of the two propulsion engines due to accident or ordinary wear and tear during the life of the vessel.

The Court finds and concludes that Marine Development Corporation knew or should have known that there were significant openings from the engine compartment into the living spaces—and I believe that statement was acknowledged in the opening statement of Mr. Carroll—and that they knew or should have known that carbon monoxide might, during the life of the vessel, be found in the engine compartment in dangerous concentrations.

Marine Development also knew or should have known that if the forward cooling unit were installed as it was in the equipment room it could and would, under certain forseeable circumstances, draw air from the engine compartment and circulate it throughout the living areas of the boat.

Of all the parties to this action, Marine is and should be the most knowledgeable with respect to the effects of air-conditioning systems and their operations. It has more than 50 percent of all the air-conditioning business in the class of boats and yachts of the approximate size of the Heiman vessel.

It has held itself out as a specialist in marine air-conditioning and has represented to its customers and to the public at large that it has a long history of testing and **[1782]** improving its products. It has maintained a close relationship with a large number of boats manufacturers. It has a naval architect on its staff and others experienced in boat construction.

It knew that with very rare exceptions all craft for which it supplies air-conditioning equipment have non-airtight engine compartments. It knew that the engine which drives the generator is almost invariably located in the engine compartment along with the propulsion engines. It knew that its products would be integrated with the Kohler unit or an Onan unit and operated in conjunction with such a unit.

It is further clear from the evidence that Marine Development Corporation sells more than off-the-shelf products to its customers, whether those customers be the manufacturers of boats or its franchise dealers.

Marine, in fact, offers advice and assistance with respect to the design and installation of the components which it manufactures. Here Boatel, if it actually received such advice, did not follow it; but the question remains: should a party in the position of Marine, with its superior knowledge and information, not only advise its customers how properly to install its products but also where there is a significant, known hazard to

health or life which could result from improper installation, clearly and specifically to warn thereof.

The Court has already found that Marine did not **[1783]** really understand and appreciate the effect of the improper location of its units in terms of the hazard to life and health involved, although it did understand the effects of such improper location upon the efficient operation of its cooling and heating equipment.

The Court finds and concludes that defendant, Marine Development Corporation, should have known of the hazard to life and health posed by the improper installation of its equipment; and, therefore, that it should have warned Boatel in a clear and unequivocal way concerning same.

A manufacturer must know the nature and propensities of its products and warn of dangers created by that nature and those propensities. In this connection a distinction must be drawn between the duty to give adequate instructions and directions for the use or installation of a product, on the one hand, and the duty to warn of potential hazards which might result from deviations from such directions or instructions, on the other hand.

Here Marine did not know the hazards and, therefore, did not warn against them. Its instructions requiring that the cooling unit be located in the space to be cooled or heated and that such units should be installed so that there would be an adequate path for the air to circulate freely into the units from the space being cooled and then from the units back to the space being cooled were obviously and clearly **[1784]** directed toward the objective of the efficient utilization of the equipment for heating and cooling.

In the eyes of Marine Development Corporation the improper installation of a cooling unit in a space other than that to be cooled would greatly interfere with the efficient operation of the equipment. That it might also act as a pump to draw any carbon

monoxide which might be in the engine compartment was not known or considered by Marine prior to the investigation of this tragedy.

Directions and warnings obviously serve different purposes. Rarely can one be an adequate substitute for the other. It was Marine's duty here, therefore, to warn of any hazard to life or health that might forseeably result from the improper location of its equipment.

The failure to warn may be predicated upon the theories of either negligence or strict liability. Here Marine, being so intimately associated with boat manufacturers and boat designers, knew or should have known that such manufacturers, for their own convenience and for design purposes, might install the cooling unit so at to have the effect of pumping air from the engine compartment.

The potential seriousness of the injury which might result is obvious. In addition, there is no practical impediment to its ability to give an adequate warning. Carbon monoxide is odorless, colorless, and tasteless. It is insidious and **[1785]** subtle in its operation and effect. If there is any risk of it being introduced into a living space, a warning of that risk should obviously be given.

The Court finds and concludes that Marine Development Corporation owed such a duty to warn not only Boatel, the boat manufacturer, but also prospective purchasers and users of the draft under the facts and circumstances of this case.

Marine Development did not undertake to actually inspect and supervise the installation of its equipment by boat manufacturers, although it frequently made itself available to perform such services when a new model or a new installation was contemplated.

Where it knows that it will not be in a position to supervise and inspect and installations on each of the boats in which its equipment is installed, then it obviously has the duty to prospective purchasers and users to adequately warn them of the potential hazard which would result from the improper installation of that equipment.

The Court finds and concludes that Marine Development's failure to give such a warning was a proximate cause of the death of Mr. Heiman and injuries of Mrs. Heiman and Sandra Heiman.

Now I am going to make certain findings with respect to Kohler, but I can tell you before I conclude that I have yet to determine legal liability with respect to that particular **[1786]** question. I hope to do so promptly.

In any event, the factual findings that I will make are as follows:

The Kohler Company supplied Boatel with a generator set consisting of the generator proper, an internal combustion engine to drive the generator, and a muffler which Boatel then installed in the engine compartment of the Heiman boat. These Kohler products were line production items which were sold by Kohler to Kizer Engine Sales in Green Bay, Wisconsin, which in turn sold them unchanged to Boatel.

The first Islander 47 yacht was constructed in September 1969 and either contained an Onan or Kohler generator unit. The recirculating air-conditioning systems were not installed on Boatel yachts as optional equipment until sometime in 1971. No tests were made by Boatel, the manufacturer, to determine how these items of optional equipment affected each other in the completed boat. The photos of the yacht contained in the Boatel brochure, Plaintiff's Exhibit 34, and other evidence indicates that not all Islander 47 yachts have the bilge blower exhaust vent located on the vertical transom panel.

Although there was some evidence indicating that Kohler representatives saw the Islander 47 yacht displayed at the boat show in 1969, there is no adequate evidentiary basis for the Court to find that the displayed boat had the bilge blower exhaust vent located in its transom as it is on the Heiman boat.

[1787] The Court further finds that at no time prior to the commencement of this action did Kohler or any of its representatives know or have any reason to know of the four drain holes located in the underside of the overhanging portion of the transom.

Now by way of footnote, Kohler cites as a defense the language which is contained in its manual which provides: "Never put inlets on the transom." The Court does not feel this language gives Kohler much comfort because it finds that the term "inlets" properly interpreted, in context, would be restricted to the venting systems of inlets and outlets there under consideration in that portion of the manual.

In installing the generator, Boatel relied upon the Kohler technical installation manual. Although Kohler's manual indicates on the first page that detailed installation plans can be obtained upon request from Kohler, none were ever requested by Boatel. Boatel alone designed the transom of the boat, the engine compartment, the forward wall of the engine compartment, the installation arrangement for the air-conditioning system, and the sliding door arrangement for the forward air intake.

It is undisputed that no consequential leaks existed in the Kohler unit or its exhaust system. There is no evidence that the Kohler components were defective in design, installation or operation. There is a complete absence of any evidence of any manufacturing defect which was in existence at **[1788]** the time the components left the Kohler factory. It is undisputed that fumes and gases from the Kohler gasoline combustion engine were exhausted outside of the boat.

Mr. Klapmeier of Boatel admitted that he was well aware of the fact that internal combustion engines emit carbon monoxide, that carbon monoxide is dangerous and lethal, and that he knew these facts before designing the Islander 47 yacht.

Now, gentlemen, that is as far as I have gotten. I have not made my final decision on the possible Kohler liability and

I have not made findings here yet with respect to damages. I hope to complete this maybe even tomorrow—hopefully tomorrow—because I need to get on with the business of the Court. If so, we will call you and let you know so that you can come by and pick up copies of the further findings and conclusions.

If there is nothing else, we will be in recess.

(Whereupon, at 5:35 p.m., the above-entitled proceedings were concluded.)

[1789] **Certificate**

I, Carolyn S. Fant, Official Court Reporter for the United States District Court for the Eastern District of Arkansas, Western Division, appointed pursuant to the provisions of Title 28, United States Code, Section 753, do hereby certify that the foregoing is a full, true and correct transcript of proceedings had in the within-entitled and numbered cause on the date hereinbefore set forth; and I do further certify that the foregoing transcript has been prepared by me or under my direction.

CAROLYN FANT
Official Reporter

IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1976

No. 76-160

MEDLIN MARINE, INCORPORATED,
Petitioner,

vs.

MRS. ALANA G. HEIMAN, in Her Own Right; SANDRA JEAN HEIMAN, by MRS. ALANA G. HEIMAN, Her Mother and Next Friend; and H. MAURICE MITCHELL and JOSEPH W. GELZINE, Co-Administrators in Succession With Will Annexed of the Estate of Max Heiman, Deceased, and MARINE DEVELOPMENT CORPORATION,
Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Eighth Circuit

BRIEF FOR MEDLIN MARINE, INCORPORATED, IN OPPOSITION

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OPINIONS BELOW

The per curiam order of the Court of Appeals, not yet reported, appears in Appendix B of Petitioner's Petition for a Writ of Certiorari. The Panel Opinion of the Court of Appeals, not reported, appears in Appendix F of Petitioner's Brief. The Supplemental Memorandum Opinon of the District Court appears

in Petitioner's Appendix G. The Memorandum Opinion of the District Court filed of record on March 7, 1975, appears in Petitioner's Appendix I. The District Court's Findings of Fact appear in Petitioner's Appendix J.

JURISDICTION

The Judgment of the Court of Appeals, was entered on May 14, 1976. A timely Petition for Rehearing was denied on May 7, 1976, and Petitioner's Petition for a Writ of Certiorari was filed within ninety (90) days of that time. This Court's jurisdiction is invoked under 28 U.S.C. §1254(1).

QUESTION PRESENTED

Whether the Eighth Circuit Court of Appeals properly held that Marine Development, Inc. had a duty to warn Boatel and the Heimans, that its air conditioning system could be installed in the Heiman yacht in such a way as to draw from the engine compartment.

STATEMENT

This is an admiralty case brought pursuant to Rule 9 (h) of the Federal Rules of Civil Procedure by the Estate of Max Heiman, Deceased, Mrs. Alana Heiman and Sandra Heiman against Boatel, the manufacturer of the boat; Kohler, the manufacturer of a gasoline powered generator on the boat; Marine Development, Inc., the manufacturer of an air conditioning unit on the boat: and the respondent, Medlin Marine, Inc., the retailer of the boat.[1]

[1] The Respondent in this action, Medlin Marine, Inc., has petitioned this Court for a Writ of Certiorari requesting that this Court review the decision of the lower court in refusing to grant it indemnity from Marine Development, Inc., and in allowing the addition of an inflation factor to the award for loss of contributions.

The evidence showed that carbon monoxide gas was created by the burning of a gasoline powered generator built by Kohler Corporation. The design of the craft called for the gas to be exhausted at the stern of the boat just below the waterline. Immediately over the exhaust outlet, there was an overhang with four water drainage holes in the bottom of it. The holes were concealed so as not to be visible when the boat was in the water. Since there was a vacuum in the engine compartment caused by the generator's need for air, the exhaust fumes were sucked through the four holes back into the engine compartment.

Between the engine compartment and the living quarters of the boat there was a non-airtight wall. Without the air conditioning operating, there would be a slight draw of air from the living quarters to the engine compartment due to the vacuum created by the generator. Thus, although potential for danger existed, real danger was not present until the flow of air was reversed.

The return air of the air conditioning equipment proved to be the agent for reversal and it was installed by Boatel near a passage that led to the engine compartment.

Marine Development Corporation, according to the findings of the Court, did not know that its equipment could be installed in such a way as to draw from the engine compartment and, therefore, gave no warning of this danger.

The Court concluded that Boatel, Inc., the manufacturer of the boat, was negligent and liable to the plaintiffs in strict liability. Marine Development, the air conditioning manufacturer, was found negligent for failure to warn and liable in strict liability. Medlin Marine, as seller of the boat to Heiman, was found liable in strict liability and implied warranty. Kohler was found not to be liable. As between Boatel and Marine Development, the Court assessed fault as follows: Boatel 80%; Marine

Development 20%. Medlin was given judgment for indemnity against Boatel. In a Supplemental Opinion the Court denied Medlin's claim for indemnity against Marine Development holding instead that Medlin and Marine Development were equally at fault.

ARGUMENT

Respondent respectfully submits that petitioner's petition for a writ of certiorari should be denied for the reason that the lower court decision regarding the liability of Marine Development Corporation was based on the application of accepted tort principles to the facts of this case.

The Petitioner misinterprets the reasoning of the lower Court in assessing liability against it. The Trial Judge found that Marine Development knew, or should have known, that its air conditioning unit could be installed in such a way as to draw air from the engine compartment. In addition, the Court found that Marine Development knew that the engine compartment on the Heiman yacht was not airtight. The Court concluded that all parties knew, or should have known, that during the life of the yacht the exhaust system could, and probably would, malfunction causing carbon monoxide to enter the engine compartment. Based on those findings the Court found that Marine Development had a duty to warn Boatel and the Heimans that its air conditioning system could be installed in such a way as to draw from the engine compartment.

In the instant case, carbon monoxide did not enter the engine compartment from a faulty exhaust system, nevertheless, carbon monoxide did, in fact, get into the engine compartment and from there it was drawn into the living quarters of the yacht by Marine's air conditioning system.

The law in the United States is that where the results of the defendant's negligence are foreseeable the fact that the result is brought about by a source not foreseen does not change his duty, nor his liability for the resulting injuries. The landmark case of *Johnson v. Kosmos Portland Cement*, 64 F.2d 193, 6th Cir. 1933, is directly in point. In that case the defendant failed to clean the residue out of an oil barge leaving it full of explo-

sive gas. A fire and explosion occurred when the barge was struck by lightning. In holding that, although the lightning was not foreseeable, the defendant's negligence was the cause of the resulting injuries and damages, the Sixth Circuit stated:

> "We think the true rule to be that when the thing done produces immediate danger of injury, and is a substantial factor in bringing it about, it is not necessary that the author of it should have had in mind the particular means by which the potential force he has created might be vitalized into injury."

The present case presents basically the same situation. Marine, by failing to warn Boatel and the Heimans that its air conditioning system could be installed in such a way as to draw air from the engine compartment, created a dangerous situation. With the knowledge that the Trial Court found Marine had, or should have had, that carbon monoxide could get into the engine compartment and that Marine's air conditioning could be installed in such a way as to draw air from the engine compartment, Marine had a duty to warn of that danger. What was foreseeable from is failure to warn, that is, carbon monoxide getting into the engine compartment and being drawn into the living quarters, is exactly what happened. The fact that the carbon monoxide came from the portholes in the transom, other than a faulty exhaust, should not and does not alter Marine's responsibility for negligently failing to warn of the danger. The noted authority, Dean Prosser, in his handbook on Torts states the rule thusly:

> "* * * if the result is foreseeable, the manner in which it is brought about need not be, and is immaterial."

In the instant case the fact that the carbon monoxide got into the engine compartment from an unexpected source does not change Marine's duty to warn nor its responsibility for the breach of that duty.

Marine next argues that it had no duty to warn because the danger of installing the air conditioning system as it was installed in the present case was an obvious danger. This argument completely ignores the evidence in the case. The Trial Court, sitting as a fact finder, after hearing all of the evidence, made the following findings of fact from the bench:

> The Court has already found that Marine did not [1783] really understand and appreciate the effect of the improper location of its units in terms of the hazard to life and health involved, although it did understand the effects of such improper location upon the efficient operation of its cooling and heating equipment.
>
> The Court finds and concludes that defendant, Marine Development Corporation, should have known of the hazard to life and health posed by the improper installation of its equipment; and, therefore, that it should have warned Boatel in a clear and unequivocal way concerning same.
>
> A manufacturer must know the nature and propensities of its products and warn of dangers created by that nature and those propensities. In this connection a distinction must be drawn between the duty to give adequate instructions and directions for the use or installation of a product, on the one hand, and the duty to warn of potential hazards which might result from deviations from such directions or instructions, on the other hand.
>
> Here Marine did not know the hazards and, therefore, did not warn against them. Its instructions requiring that the cooling unit be located in the space to be cooled or heated and that such units should be installed so that there would be an adequate path for the air to circulate freely into the units from the space being cooled and then from the units back to the space being cooled were obviously and clearly [1784] directed toward the objective of the efficient utilization of the equipment for heating and cooling.

> In the eyes of Marine Development Corporation the improper installation of a cooling unit in a space other than that to be cooled would greatly interfere with the efficient operation of the equipment. That it might also act as a pump to draw any carbon monoxide which might be in the engine compartment was not known or considered by Marine prior to the investigation of this tragedy. (Pages 1461-1462).

Marine did not know of the danger involved in installing its air conditioning system in the manner it was installed in the present case, yet they now argue that the danger was obvious. Marine's position in this regard is similar to that of the defendants in the case of *Borel v. Fibreboard Paper Products Corporation*, 493 F.2d 1976 (5th Cir. 1973). In that case plaintiff was seriously injured as a result of working with asbestos over a long period of time. The defendants argued on the one hand that danger from working with asbestos was not known to them within a certain time frame and the danger to the plaintiff was unforeseeable. As a second argument, they contended that the danger was obvious to the plaintiff. In dealing with this position, the Court stated:

> "As previously mentioned, the foreseeability of the danger must be measured in light of the manufacturer's status as an expert and the manufacturer's duty to test its product. In these circumstances, we think the jury was entitled to find that the danger to Borel and other insulation workers from inhaling asbestos dust was foreseeable to the defendant at the time the products causing Borel's injuries were sold. * * *. Here, the defendants gave no warning at all. They attempt to circumvent this finding by arguing, disingenuously, that the danger was obvious."

Referring to the defendant's argument as anomalous, the Court easily concluded that the evidence on obviousness was not "so compelling that reasonable and fairminded persons would have

concluded that Borel discovered the defect and was aware of the danger, and nevertheless proceeded unreasonably to make use of the product.

The Trial Court found that both Boatel and Marine were ignorant of the potential dangers involved in the air conditioning system. That ignorance does not relieve Marine of its liability for failing to warn of the dangers involved in the installation of its air conditioning system. Marine had a duty to know the propensities of its air conditioning system. In *Tucson Industries, Inc. v. Schwartz*, 108 Ariz. 464, 501 P.2d 936 (1972), the Court stated:

> "The maker of an article for sale or use by others must use reasonable care and skill in designing it and providing specifications for it so that it is reasonably safe for the processes for which it is intended and for uses which are foreseeable probably [sic]. A person who undertakes such manufacturing will be held to the skill of an expert in that business and to an expert's knowledge of the art, materials and processes. Thus he must keep reasonably abreast of scientific knowledge and discoveries touching his product and the techniques and devices used by practical men in his trade. He may also be required to make tests to determine the propensities and dangers of his product."

Marine was woefully short of complying with the above rule. Being ignorant of the propensities and potential dangers of its product, it is hardly in a position to avoid liability on the grounds that such dangers were obvious to others.

Marine, throughout its brief, argues that it had no duty to warn because it was merely a component part manufacturer. We do not understand the comfort which that argument seems to give Marine. Component part manufacturers are held to the same duty of care as manufacturers of other articles for sale. They are required to use ordinary care in the manufacture and

sale of their products. It is clear from the cases that component part manufacturers, just like manufacturers of completed products, must use ordinary care and may be held liable in negligence or strict liability when they breach their duty of care. See *Barth v. B. F. Goodrich Tire Company*, 61 Cal. Rptr. 306; *Suvada v. White Motor Company*, 210 N.E.2d 182 (Ill. 1965); *Burbage v. Boiler Engineering and Supply Company*, 433 Pa. 319, 249 A.2d 563; *Tromza v. Tecumseh Products Co.*, 378 F.2d 601, 605-06, 3rd Cir. (1967); *Texaco v. McGrew Lumber Company*, 254 N.E.2d 854, 117 Ill. App. 2d 351 (1969).

Commenting that the old case of McPherson v. Buick Motor Company left open the question as to whether the component's part's manufacturer would be liable, *Frumer and Friedman, Products Liability*, §9.01 comments:

> "There is no good reason why he shouldn't be. Subsequent New York decisions and the cases generally make it clear that the manufacturer of a component part is just as liable for defects in the part due to his negligence as any other manufacturer."

As to the liability of components' parts' manufacturer in strict liability cases, *Frumer and Friedman, Products Liability* §16A (4)(b)(i) states:

> "The view expressed in connection with the warranty cases, that assembler and the manufacturer of the component parts should both be strictly liable in warranty, leaving the assembler to his remedy against the part manufacturer by the way of indemnity, is the same as that applied to the situation under discussion. The strict tort liability cases are in accord with the above view that the rule applies to the manufacturer of a component part."

The failure to warn duty is upon the component's part's manufacturer when he has, or should have, knowledge concerning the propensities of his product which the further processor or assembler may not have.

In the instant case, Marine was more than a mere component's part's manufacturer. The Trial Court made the following findings of fact:

> "It is further clear from the evidence that Marine Development Corporation sells more than off-the-shelf products to its customers, whether those customers be the manufacturers of boats or its franchise dealers.
>
> Marine, in fact, offers advice and assistance with respect to the design and installation of components which it manufactures.
>
> "Based on the above, it is clear that Marine, with its superior knowledge and skill, had the duty to warn not only Boatel but the Heimans also that the air conditioning system that it manufactured could be installed in such a way as to draw from the engine compartment. That failure to warn proximately caused the death of Mr. Heiman.

CONCLUSION

Respondent respectfully submits that Marine Development's Petition for Certiorari should be denied for the reasons that under the law and the facts of this case Marine's liability was properly decided by the Trial Judge who heard the evidence.

Respectfully submitted,

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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1976

No. 76-160

MARINE DEVELOPMENT CORPORATION,
Petitioner,

v.

MRS. ALANA G. HEIMAN, In Her Own Right; SANDRA JEAN HEIMAN, by MRS. ALANA G. HEIMAN, Her Mother and Next Friend; and H. MAURICE MITCHELL and JOSEPH W. GELZINE, Co-Administrators in Succession With Will Annexed of the Estate of Max Heiman, Deceased; BOATEL COMPANY, INC.; KOHLER CO. and MEDLIN MARINE, INC.,
Respondents.

No. 76-161

MEDLIN MARINE, INCORPORATED,
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RESPONDENTS' BRIEF

In Opposition to

PETITION FOR A WRIT OF CERTIORARI

To the United States Court of Appeals for the Eighth Circuit

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I

THE PETITION OF MEDLIN MARINE, INC.

Medlin Marine, Inc. petitions for certiorari as to the respondent survivors of Max Heiman solely on the ground that "the

trial court erred in projecting a specific rule of inflation over Max Heiman's life expectancy in measuring damages for loss of future earnings." Medlin argues that the decision of the Court of Appeals for the Eighth Circuit conflicts with other circuits. The simple answer is that there is no opinion of the Court of Appeals on this point. On rehearing in banc the panel opinion was withdrawn, and the District Judge, whose opinion was unpublished, was affirmed in a two sentence order.

The District Judge did permit an economist to give his opinion on future inflationary trends and discount rates. However, he did not accept the figures used by the economist in either regard. As the panel of the Court of Appeals stated:

> Nonetheless, in the instant case, the trial judge has set forth his factual findings, which clearly show that the court rejected the economist's analysis and applied his own understanding and experience of inflationary impact on future contributions. Judge Eisele in rejecting the economist's testimony used a 5½% present value discount rate and then applied an inflationary factor of 4%, resulting in a discount of the projected earnings by 1½%. The economist estimated loss of future contributions to Mrs. Heiman as $760,276; Judge Eisele's figure was $350,910. (A. 17)

The weight of authority in the various Courts of Appeal permits the factfinder to consider inflation in awarding damages. *Bach v. Penn. Central Transportation Co.*, 502 F.2d 1117 (6th Cir., 1974); *Riha v. Jasper Blackburn Corporation*, 516 F.2d 840 (8th Cir. 1975); *U.S. v. English*, 521 F.2d 63 (9th Cir. 1975). Cases in the various Circuits were reviewed in the latter decision and only the First Circuit was listed as following a contrary view. *Williams v. U.S.*, 435 F.2d 804, 807 (1st Cir. 1970). The latter Circuit has been joined by the Fifth, *Johnson v. Penrod Drilling*, 510 F.2d 234 (5th Cir. 1975). There is a division of authority in the Circuits on whether an economist should be

allowed to testify as to future long term rates of inflation. The Court of Appeals for the Eighth Circuit, while permitting the jury to consider inflation trends, has frowned on testimony from an economist projecting an inflationary rate over a long period of time. *Riha v. Jasper Blackburn Corp.*, 516 F.2d 840 (8th Cir. 1975) and *Johnson v. Serra*, 521 F.2d 1289 (8th Cir. 1975). These were however diversity cases applying Minnesota and Nebraska law. In a diversity case where Iowa law was applied, the Court took into account inflationary factors in affirming a verdict attacked as excessive. *Merchants National Bank of Cedar Rapids v. Waters*, 447 F.2d 234, 239 (8th Cir. 1971). See also the concurring opinion of Bright, J. in *Beanland v. Chicago, R.I. & P. RR*, 480 F.2d 109 (8th Cir. 1973, an FELA case).

The Ninth Circuit in *U.S. v. English*, 521 F.2d 63 (9th Cir. 1975) has approved the admission of testimony from an economist as to future inflationary trends. This view is supported by the leading modern work on wrongful death, where it is stated: "The decisions are almost, but not entirely, unanimous in allowing consideration of economic trends in assessing damages." S. Speiser, *Recovery for Wrongful Death* (1966), p. 524. Mr. Speiser discusses in Section 8:11 pp. 526-28, the use of testimony to establish future inflationary trends: "In order to determine what the earnings of the decedent would have been in the future, the jury should have some evidence to guide them as to what wages and prices will be in the future. The evidence is available in abundance through expert testimony of economists, estate planners and life insurance experts, and through judicial notice of various studies made by Congressional Committees and the Department of Labor's Consumer Price Index."

The principal case relied on by petitioner is *Sleeman v. Chesapeake & Ohio Railway Co.*, 414 F.2d 305 (6th Cir. 1969). With reference to this case Judge Lay (author of the panel majority opinion in case at bar) observed in *Riha v. Jasper Blackburn Corp.*, 516 F.2d 840 (8th Cir. 1975) that

the "Sleeman case has been weakened by the Sixth Circuit's later observation that the reference to the exclusion of evidence of future inflation there was mere dictum. (See *Willmore v. Hertz Corp.*, 437 F.2d 357 (6th Cir. 1971) wherein that court permitted such evidence to be considered by a jury under Michigan law)". He also pointed out that the case "is additionally weakened by the Sixth Circuit's latest opinion in a case involving an action under the FELA" and observed that this case, *Bach v. Penn Central Transportation Co.*, 502 F.2d 1117 (6th Cir. 1974) does not even mention *Sleeman*.

The inflation point urged by Medlin, which it now claims is such an important question of Federal law, was not even briefed by any of the parties after the Eighth Circuit granted rehearing en banc, as an examination of the supplemental briefs filed in the Court of Appeals will show.

In summary the following points should be noted.

(1) The District Judge cut the figures advanced by the economist more than fifty percent.

(2) The District Judge did not use the inflation factor to build up the damages. He only used an inflation factor to partially balance off the discount rate. The effect of his overall findings was to discount future contributions substantially. Such a procedure was suggested by Judge Friendly in a 1971 case, in the event inflation continued at a high rate. *Yodice v. Koninklijke Nederlandsche Stoom Maat*, 443 F.2d 76 (2d Cir. 1971). Between 1971 and 1975 it has become much worse.

(3) The rule for review of factual findings in a non-jury admiralty case is that the judgment must be clearly erroneous. *McAllister v. U. S.*, 348 U.S. 19 (1954). Surely it cannot be said that the careful analysis of the inflation factor by the District Judge was clearly erroneous.

(4) In a non-jury admiralty case there is a broad discretion vested in the U. S. District Judge as to the reception of evidence. *Santa Marine Service, Inc. v. McHale*, 346 F.2d 147 (5th Cir. 1965).

(5) If petitioner disagreed with the economist about inflationary trends, why did it not contest this testimony with its own counter-experts.

(6) Even if the admission of the testimony by the economist in the case at bar was error, it was not prejudicial because the District Judge arrived at his own figure on the inflationary factor and the discount rate. If the economist's testimony is completely eliminated from the record, the District Judge's conclusions in these respects are patently reasonable.

(7) The reasonableness of the award in this case is shown by consulting D. Thorndike, *The Thorndike Encyclopedia of Banking & Financial Tables* (1973). These tables show that the Heiman family would have to pay $291,600 for an annuity which would pay $22,500 (contributions, not wages) annually over decedent's life expectancy. This is computed at a 5½% interest rate not taking into account the inflation factor. Only $78,600 in excess of this amount was awarded for future contributions of Mr. Heiman to his family. Thus diminution in the purchasing power of the dollar constituted only a small part of the award.

II

THE PETITION OF MARINE DEVELOPMENT CORPORATION

Marine makes an unusual contention in this case. "First, Marine Development Corporation contends it is not liable for failure to warn on the basis of the trial court's own findings." In other words, Marine does not attack the court's findings of fact. In the face of these findings, Marine says it is not liable *as a matter of law*. The court's findings with regard to Marine Development are set out in Marine's Petition, Appendix J, pp. 64-69. Marine could hardly argue that such findings are clearly erroneous. As a matter of fact they are supported by overwhelming evidence. Given these findings, respondents submit that the following is the applicable law.

As noted in Noel and Phillips, *Products Liability* (West Pub. Co. 1974), p. 161, a distinction should be drawn between the duty to give adequate directions for use and the duty to warn. The authors then make a statement that fits Marine's situation like a glove: "Directions are calculated primarily to secure the efficient use of a product. *Where, however a departure from directions may create a serious hazard, a separate duty to warn arises.*" (Emphasis added.) They then cite *McLaughlin v. Mine Safety Appliances Co.*, 11 N.Y.2d 62, 226 N.Y.S.2d 407, 181 N.E 2d 430 (1962). This case involved heat blocks used to help revive injured persons. Instructions to wrap the blocks in insulating material before using were given, but there was no statement that if used without insulation the blocks cause serious burns, as they did to the plaintiff. In stressing the need for a warning, the court observed that "*Instructions*, not particularly stressed, do not amount to a *warning of the risk at all*. . . ." (Emphasis by court.) *Id.* at 434.

Admittedly in this case, Marine, in stating that the unit should be located in the space to be cooled. was only concerned with "efficient use of its product." In no sense was this statement a warning. The Restatement of Torts emphasizes a supplier's duty, where a product is likely to be dangerous for its intended use, to exercise reasonable care to inform users "of its dangerous condition or of the facts which make it likely to be dangerous." *Restatement, Second, Torts*, § 388(c).

The same is made by Frumer and Friedman, *Products Liability*, § 8.05[1]:

> There is substantial authority that the manufacturer must give both adequate directions for use and adequate warning of potential danger. Directions and warnings serve different purposes. Directions are required to assure *effective* use, warning to assure *safe* use. It is clear from the better-reasoned cases that directions for use, which merely tell how to use the product, and which do not say anything about the danger of foreseeable misuse, do not necessarily satisfy the duty to warn.

One of the cases cited in this section is *Jackson v. Baldwin-Lima-Hamilton Corp.*, 252 F.Supp. 529, *cert. den.* 385 U.S. 803 (1966), a diversity case tried in Pennsylvania but applying Arkansas law. The basis of liability was a failure to warn users about lubricating a vital part of a crane whose malfunction caused the death. The part was not on the lubrication chart, even though there were general instructions about proper lubrication.

Farley v. Edward E. Tower & Co., 271 Mass. 230, 171 N.E. 639 (1930), 86 A.L.R. 941 (1933), makes the very point *that a statement that a product is not designed for a particular use is not the equivalent of a statement that such use is hazardous.* The product involved was an inflammable comb, and the insufficient warning consisted of "not designed to be used for

the dressing of hair together with a machine that was designed to produce heat." *Id.* at 643.

Another important case is *Panther Oil & Grease Mfg. Co. v. Segerstrom*, 234 F.2d 216 (9th Cir. 1955), which involved explosion of a primer. The court said that even if the pamphlet of instructions related intelligibly to the primer as distinguished from the roof coating product, "we think the instruction it contained does not reach the point attempted to be made. It actually says no more than the heating or thinning of the product will damage its waterproofing qualities. The injunctions both as to heating and thinning are directed toward the mere matter of utility. There is no warning or suggestion that the heating of it would or might pose a hazard of any sort or a consequence other than as stated." *Id.* at 218. See also *Butler v. Sonneborn Sons, Inc.*, 296 F.2d 623 (2nd Cir. 1969).

The *Restatement, Second, Torts*, § 388 sets out the governing principles of a failure to warn theory based on negligence. However, failure to warn as pointed out in the *Restatement Second Torts*, § 402(A), Comment (j), may also provide a basis for strict liability in tort. For two recent Ninth Court cases basing strict liability in tort on failure to warn see *Nelson v. Brunswick Corp.*, 503 F.2d 376 (9th Cir. 1974) and *Jackson v. Coast Paint & Lacquer Co.*, 499 F.2d 809 (9th Cir. 1974). See also discussion of the latter case in Frumer & Friedman, *Products Liability*, Vol. 2, § 16A pages 336.1 through 336.4.

In negligence cases the three factors generally used to determine the existence of a duty are: (1) The likelihood of an accident when the product is put to foreseeable use without warning; (2) the probable seriousness of injury if an accident does occur, and (3) the feasibility of an effective warning. See Noel and Phillips, *op. cit. supra*, p. 162. All these elements were present in the case at bar.

Frumer & Friedman discuss the legal basis of the duty to warn in Sections 8:01 through 8:05. Scores of cases are cited. A landmark case in this court applying Michigan law is *Larsen v. General Motors Corp.*, 391 F.2d 495 (8th Cir. 1968). "A head-on collision, with the impact occurring on the left front of the Corvair, caused a severe rearward thrust of the steering mechanism into the plaintiff's head. . . . The plaintiff's complaint alleges . . . (2) negligent failure to warn of the alleged latent or inherently dangerous condition to the user of the steering assembly placement. . . ." *Id.* at 496. In unanimously reversing a summary judgment for defendant, the court said, "The failure to use reasonable care in design or knowledge of a defective design gives rise to the reasonable duty on the manufacturer to warn of this condition." *Id.* at 505.

In *Alman Bros. Farm & Feed Mill, Inc. v. Diamond Labs, Inc.*, 437 F.2d 1295 (5th Cir. 1971), the court observed that there is a duty to warn where a dangerous product is involved. An Illinois Court of Appeals had occasion to consider whether a carbon monoxide producing appliance was a dangerous instrumentality. In *Beadles v. Servel, Inc.*, 344 Ill.App. 133, 100 N.E.2d 405 (1951), plaintiffs were overcome by carbon monoxide produced by a gas refrigerator. In holding that a cause of action was stated on failure to warn, the court said: "Applying this test to the refrigerator in the case at bar, we cannot hold, as a matter of law, that a mechanism so designed and constructed as to, or which in ordinary operation does, give off deadly carbon monoxide gas is not an inherently dangerous instrumentality." *Id.* at 410.

In the case at bar the petitioner Marine knew that its system would be used with a gasoline-powered generator that would produce carbon monoxide in a non-airtight engine compartment. *It knew or should have known that it was dealing with a potentially dangerous situation.* Section 388 of *The Restatement, Second, Torts* has been held to constitute a basis for liability in

products cases on many occasions. It was cited and relied on by the Fourth Circuit in *Gardner v. Q.H.S., Inc.*, 448 F.2d 238 (4th Cir. 1971), holding that a jury question was presented as to the adequacy of a warning that hair rollers were inflammable. It was cited in *Brizendine v. Visador Co.*, 437 F.2d 822 (9th Cir. 1970), in holding the manufacturer of door glass liable for injuries when the glass shattered and injured a bystander. It was relied on specifically in *Tomao v. A. P. De Sanno & Son*, 209 F.2d 544 (3rd Cir. 1953) where the manufacturer of a grinding wheel was held liable for injuries caused by its disintegration.

Section 388 was cited in *Blitzstein v. Ford Motor Co.*, 288 F.2d 738, 742 (n. 14) (5th Cir. 1961). This was a diversity case arising in Alabama in which it was claimed that failure to ventilate the trunk of an automobile caused an explosion and injuries to the driver. The court based its decision reversing a directed verdict on failure to warn.

Marine does not attack the fact findings or the above quoted governing principles of law. Marine simply argues that these well recognized legal principles do not apply to component-manufacturers but only to the manufacturers of finished products. It argues that this court should so hold as a matter of law "to have uniformity of decision among the courts of appeal." (Marine Petition p. 8). Marine has, however, cited no conflicting Court of Appeals decision in this respect. In fact we are unable to find any case either in petitioner's brief or elsewhere that supports such a novel argument. Frumer & Friedman, *Products Liability*, Vol. 1 §9.01 states that "the cases generally make it clear that the manufacturer of a component part is just as liable for defects in the part due to his negligence as any other manufacturer." Many cases are cited where liability has been imposed against compound manufacturers for defective products. Failure to warn makes a product defective as pointed out, *supra*, *Restatement, Second, Torts*, § 402(A) Comment (j); *Nelson*

v. Brunswick Corp., 503 F.2d 376 (9th Cir. 1974); *Jackson v. Coast Paint & Lacquer Co.*, 499 F.2d 809 (9th Cir. 1974).

Supreme Court Rule 19 sets out the bases for the granting of a petition for certiorari to this court from a U.S. Court of Appeals. A reading of this rule shows a complete absence of any ground for certiorari in this case.

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